

AMERICAN BEE JOURNAL



Volume 98

1958

Number 8

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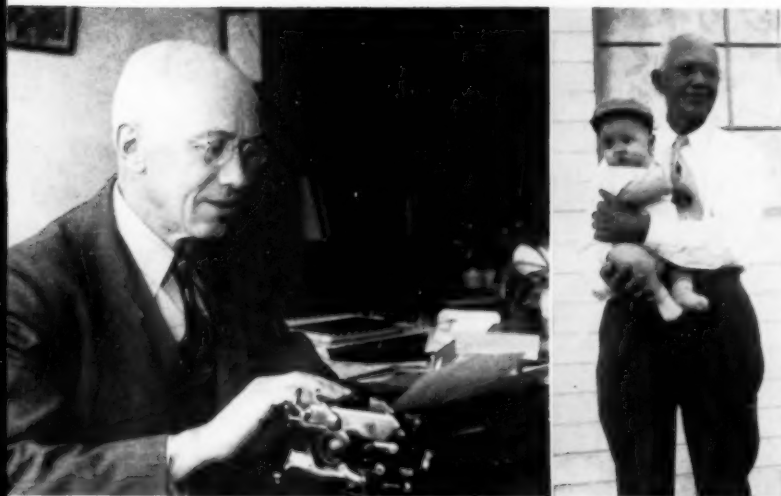
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- Our Cover Picture -

WHO IS IT? — A Contest, Editor Pat Diehnelt



George H. Rea, was busily at work as Extension Assistant Professor of Apiculture in Cornell University, Ithaca, N.Y., when the picture of him at the left was taken in November 1939. At the right, George is holding his great grandson, William Rea Gregory, in Mesa, Arizona, in December, 1951.

The July Mystery Guest Is George Harold Rea

Born in Maryland in the year 1880. Moved to Pennsylvania while very young. Always a nature lover, roved the woods and fields to observe the habits of wild life. Hived colonies of bumble bees in glass covered crayon boxes for study. Secured first colony of honey bees at age sixteen. Developed extensive beekeeping with one of his brothers. Was first State Apiary Adviser for Pennsylvania. First Extension Apiarist for USDA with service in five states. Honorary member of eleven beekeepers associations, with gifts, certificates and plaques. Member Emeritus of Entomological Society of America. Member Emeritus of Epsilon Sigma Phi. Honorary Deacon of his home church after fifty years of service.

The Mystery Guest for This Month

The infectious smile of this "beardless" mountain man extends its hearty influence over a good part of his section of the country. He is one of the folks that know his wide circle of friends as "John," or "Mary," or "Hi ya, kids!" His job is to know the problems of every beekeeper he contacts and to bring a solution in some way to the knotty ones.—Well? Just won't tell you the story; you finish it.

Send your guess as to who he is and what he has done to Cover Contest, ABJ. As before, for the best answer \$5.00 and a three year subscription; second, two years; third, one year. All others four months each. Answers will be published in August as far as room allows.

WINNERS FOR THE JUNE COVER CONTEST

DR. VERN G. MILUM

Answers came from Marigene Hutton, Gifford, Illinois; Dr. C. B. Schwab, Fairbury, Nebraska; H. H. McPherson, Ashton, Illinois; Walter G. Appel, Rantoul, Illinois; Emil Domas, Ritter, Oregon; Roger Wolter, West Salem, Wisconsin; Auguste Mousty, Neuville, Belgium; Francis Wickham, Warren, Pennsylvania; and S. C. Clausen, Byron, Illinois.

No. 1—Marigene Hutton, Gifford, Ill.

Thanks to the American Bee Journal for the privilege of paying tribute to Professor Vern G. Milum, the Economic Entomologist and Apiculturist of the University of Illinois.

Dr. Milum had many interests in life, but the idea of "bees" was farthest from his mind in his early college years. First College at La Crosse State Teachers' College 1914 to 1916, teaching the sixth grade at Goshen, Indiana from February through June of 1916, student again at the Oshkosh Wisconsin State Teachers' College for sum-

mer of 1917 and then commissioned a Second Lieutenant in World War I.

When overseas, he was wounded in action and this changed his life. He decided outside work was necessary, and in September 1919, he entered the School of Agriculture, University of Wisconsin as a junior. A friend of his, Mr. Boggs of Verona, Wisconsin, had earned part of his way through college by keeping bees. Dr. Milum became curious about beekeeping and enrolled in a beginning course in apiculture. As he liked it very much he continued with an advanced course and upon promise of a position in apiculture he majored in it.

About thirty-three years ago, in 1925, Dr. Milum became instructor in Economic Entomology, in charge of Apiculture at the University of Illinois. As a professor at the University he still has the curiosity about bees and their habits necessary for research. Four principal fields of his work have been—

a. Temperature relations of honey bees

and the effect upon behavior and management practices.

b. Pests of honey combs and their life histories.

c. The nature and care of honey, with especial study of controlling the factors affecting changes in honey.

d. Behavior of bees, including their dances, with further observations of them now in progress.

Dr. Milum has been honored in his chosen profession, and has served the industry in many capacities. Secretary Illinois State Beekeepers' Association 1927-1931; president 1936. Secretary Treasurer, American Honey Producers League, 1931-1935. Member of Board of Directors American Honey Institute, 1939-1946; executive committee, 1940; Chairman finance and nominating committee 1940. Secretary-Treasurer, National Federation of State Beekeepers' Associations 1944-1945; chairman of honey plant committee 1943. Member representing honey producers on national committee for standardization of honey containers cooperating with and set up by the Bureau of Standards, U. S. Department of Agriculture since 1933. There are a few of them.

Not only has Dr. Milum written many learned publications about bees, but he is never too busy to help and encourage beginning beekeepers, or to help solve problems of the "experts." To know Dr. Milum is an inspiration.

No. 2—Dr. C. B. Schwab, Fairbury, Nebraska

The June mystery guest, Dr. Vern G. Milum, has contributed much to beekeeping through his exacting research in the field and the fine, informative articles which he has written for the betterment of American "bee know-how."

Dr. Milum was born in Viola, Wisconsin. He served with distinction in World War I as a second lieutenant in the Infantry in France. Seriously wounded in the second battle of the Marne, his career as a "doughboy" was ended for he was returned home and discharged with the Purple Heart and Service Medal.

Vern, upon recovering from his wounds, began his study of apiculture at the University of Wisconsin where he eventually served as an instructor and continued his educational progress in apiculture and entomology. In 1925 he became an assistant professor at the University of Illinois in the same area of research and was advanced to a full professorship in 1952.

His talents and willingness to serve have won him many honors and offices, some of which have been: Secretary of the Illinois Association, Honey Producers League, National Federation, Board of Directors of the National Honey Institute, and numerous committees and other offices and responsibilities.

Those of us who have not met Dr. Milum personally are acquainted with him from his over 50 major published works and many small articles and reports.

No. 3—H. J. McPherson, Ashton, Ill.

The June mystery guest is Dr. Vern G. Milum who is well known and has many friends in beekeeping. Many practices which are now a part of beekeeping are the result of Dr. Milum's tireless efforts to further the bee industry and many beekeepers have profited greatly from his accomplishments.

Vern was born in 1894 in or near Viola, Wisconsin. It was there in Wisconsin that he received his education—grade through college. It was in Wisconsin that he received training both in business and teaching. In 1917 he became a Second Lieutenant and served overseas in the Infantry. Being seriously wounded in the second battle of the Marne, he was returned home and discharged after receiving the awards of the Purple Heart and Service Medal.

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The American Bee Journal

— Hamilton, Illinois

Vol. 98, No. 8

August, 1958

Editor—G. H. Cale

Associate Editors—M. G. Dadant,

Roy A. Grout

Published monthly at Hamilton, Illinois.
Entered as second-class matter at the Post
Office, Hamilton, Ill. In the United States,
Canada and Mexico, \$2.00 a year, two
years \$3.50; three years \$5.00. Foreign \$2.50

a year; two years \$4.50; three years \$6.50.
Subscription stopped at expiration date
printed on wrapper. Available on microfilm
at moderate prices by writing to Univer-
sity Microfilms, Ann Arbor, Michigan.

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This truck load of Modified Dadant shallow supers is about to come into the honey house from the yard. When the ground is hilly or uneven sometimes, as here, the supers are set on floor papers and then to platforms at the house. The canvas is large enough to drape down back of the cab and pull back over the entire load. A frequent

hosing and drying of the canvas removes the daubs of honey and other accumulations. A walking board from ground to bed makes it easy to load. An effective way to prepare a clean load with no tag-end of live bees and to kill out any moth larvae or eggs usually brought in with the supers is given in this issue (see page 312).

The Commercial Beekeeper

HONEY in the Horn of Plenty

A Story about that Commercial Bee Man
of North Little Rock,

RAYMOND FISCHER*

by PAT CARITHERS



Raymond Fischer Sr. isn't sorry about the rheumatism he had in his youth—even though the disease crippled him for a spell. It turned out to be a good example of the strange ways of life and the peculiar circumstances which sometimes determine futures and careers.

If it had not been for this affliction more than 40 years ago, Fischer quite possibly would never have become one of the South's leading beekeepers and honey packers. But today he is just that.

Fischer started with one beehive. Today, he has 1,600. Each year he wholesales to jobbers throughout the country more than 600,000 pounds of honey, all of which is blended and

packed in his North Little Rock plant.

From a meager operation before World War II, Fischer has guided his apiary business in an amazing fashion, building it into one of the nation's finest.

Raymond Fischer has had tremendous success with his beekeeping, but had it been another field for the 60-year-old DeValls Bluff native, there is no doubt he would have been equally successful.

There are still those peculiar events which aroused Fischer's interest in bees, leading him to a career as a beekeeper and honey packer.

As a child times were extremely difficult for Fischer. He was sickly and weak and at 16 a bout with rheumatism put him on crutches. Before this his education had been interrupted when his family's financial

condition forced him to quit school after completion of the sixth grade. The family had needed another breadwinner and he was it.

Fischer's father, a carpenter who moved to Arkansas from his native Germany, advised his son to try bee venom as a cure for his rheumatism. The elder Fischer had heard of German doctors prescribing bee stings as a remedy for the disease.

Young Fischer followed his father's suggestion. He bought his first bees and tried the painful treatment. After several bee stings his crutches were thrown away, and he has been in good health since.

Fischer, directly because of this experience, became keenly interested in the bee which he credits with curing his rheumatism.

"I bought those first bees for three

*This story originally appeared in the Arkansas Gazette. Permission to use it came from William T. Shelton, City Editor.

dollars from a colored man out on Cantrell Road in Little Rock," Fischer recalled. "He had them there in a box. At the time I didn't know a queen from a drone, but I was ready to learn."

It took a while for that, Fischer admits. There were setbacks during his early beekeeping days because as he says, "I didn't know then that bees also have diseases."

Fischer lost several hives and several dollars with his new hobby in his early years, but never once lost his interest in beekeeping.

The Fischer family had moved to North Little Rock from their home in Prairie County in 1900, and after Raymond's experience with rheumatism, he took a job in a grocery store as a meat cutter—an occupation he followed some 38 years. During that time bees were just a hobby.

As Fischer learned more about his hobby through continuous investigation, his hives increased in number and the honey really began to flow.

In the basement of his home at 2008 Main Street, North Little Rock, Fischer, his wife, the former Lena Youngblood, and their two children extracted the honey from their hives, placed it in jars—sometimes buckets when there were no jars—and sold it throughout the neighborhood.

Before World War II Fischer's enterprise was a smalltime business. Honey bearing the Fischer label could be found on several grocers' shelves in North Side stores, but the distribution was limited.

The real break for Fischer's honey came with the rationing of sugar during the War: "Everyone wanted honey to sweeten things."

Officials of a large chain grocery store approached Fischer and wanted to distribute his product in their stores. This was an opening Fischer hadn't been looking for. He has never advertised his honey and has never "pushed" it.

Soon other jobbers wanted to distribute the honey. As the demand increased the basement business began to suffer growing pains. Fischer knew he had to expand.

With his son Raymond Jr., he began planning for the expansion. There were no honey packing plants located nearby which they could inspect, so Fischer left Arkansas (for the first time in his life, incidentally) on a 33-state tour to see other packers in operation.

Although recognizing the terrific gains his small business had made in a relatively short period of time, Fischer still felt he was too small-

time and couldn't compete with packers up North and in other areas.

These misapprehensions soon faded away after his trip. Fischer knew he could and was determined to expand and direct his business successfully. And if there was any feeling of inferiority on Fischer's part—it was gone too.

With definite plans made, he erected a three-story brick building on a plot to the rear of his home. Next came modern equipment for extracting, blending, cooling and packing the honey.

Fischer estimates that he had \$150,000 worth of equipment installed in his plant, which can process about 6,000 pounds of honey daily, and as he says, "The bees have paid for it all. I have made everything as push-button as possible and the bees paid for it."

Most people would be ready to retire at this point if they were in Fischer's shoes. He will be 61 in July and has never taken a vacation. But he doesn't consider his business all work, although those who know him will tell you he has been busy as a bee all his life.

Fischer, a small, dark-haired man who dresses neatly in khaki work clothes, has a deep love and devotion for his family, which is one good reason that he doesn't retire and let the business run itself. He has four grandchildren with whom he wants to share the fruits of his labor some day.

Beekeeping is still a great hobby to Fischer and his interest in bees was never keener than it is today. "I know something about bees now, but honey is still a mystery to me," Fischer explained.

Bees have been good to Fischer through the years. His experience with the insect has been profitable in many ways. In addition to his honey business, Fischer also owns part interest in two movie theaters in North Little Rock.

Money isn't everything, someone has said, and with this Fischer warmly agrees. "My idea of being rich," he says, "is doing what you want to do."

Beekeeping is what Raymond Fischer has always wanted to do and to him it will always be fun.

New Mexico Beekeeping

by JOHN W. POWELL



Mr. and Mrs. John W. Powell, Mesilla Park, New Mexico

Just a few notes from an old-timer in beekeeping. "First, liked bees back in Tennessee where I helped cut bee trees and get the honey. Then in 1904, I went to Arizona Territory, and saw Mr. Ellis and Carr, and Keister & Carr running bees at Benson and Yuma, where carloads of catsclaw and mesquite honey were the main harvest.

"After working for the railroad for a few years, I bought an outfit of

my own, and finally went to beekeeping exclusively in 1916.

"Not as many bees in this valley as when I came here. Am happy in retirement with my bee holdings nicely placed with an active young fellow who is buying them as he works.

"Won't forget Pellett, Phillips and a number of 'old-timers' who came by to see me."

Increased Profits From Wax Production

by Roy A. Grout

"The first requisite for the secretion of beeswax is a stomach well filled with nectar or honey. It is an interesting fact that comb building and honey gathering go hand in hand, and that when one stops, the other stops also." So wrote Henry C. Dadant in the book "The Hive and the Honeybee." He also quoted Langstroth who said, "When honey no longer abounds in the fields, it is wisely ordered that they should not consume in comb building the treasure which may be needed for winter use."

Bees secrete beeswax from four pairs of wax glands in the form of tiny, white, oval flakes or scales which protrude from between the overlapped portions of the last four ventral segments visible on the underside of the worker bee. Beeswax can be secreted only at relatively high temperatures, stated variously by different authors at from 92 to 97 degrees F., and after the consumption of relatively large amounts of nectar or honey.

Dr. O. W. Parks reviewed the experiment of Rosch (also in the book mentioned above) which showed that, under normal conditions, the development of the wax glands follows the decline of the brood-nursing glands which starts somewhat before the 13th day of adult life. The wax glands begin their functioning and are at the height of their development in workers from 12 to 18 days old. And, as might be expected, it was found that comb building is done largely by workers of this age. Finally, at the age of 18 to 20 days, they perform guard duty and other incidental work within the hive.

Thus it seems fairly certain that, under favorable conditions, the secretion of beeswax is a process that takes place at a rather certain time in the life of the young worker bee when she has reached the right physiological age for this function. And, with plenty of nectar available and other conditions normal, it must be as instinctive as many of the other functions of the worker bee.

If the beekeeper has been neglectful in providing room as needed during the honeyflow, it is not sur-

prising to find them with more wax scales than they can use. They then proceed to build an overabundance of burr comb and brace comb, and attempt to build additional combs in any available room in the hive. If there is no space available, bees may cluster on the outside of the hive where lumps of wax scales can be found later, or they even may build combs there for the storage of honey. Under such conditions, many wasted wax scales will be found on the bottom board and sometimes in front of the entrance of the colony.

Newman Lyle, also writing in the book mentioned above, states: "When bulk comb honey is being produced in conjunction with extracted honey, it is frequently possible to effect control over the swarming impulse by use of bulk comb honey supers, even on colonies operated for extracted honey. There is a time at the peak of the honeyflow when nearly all colonies producing extracted honey seem to get the swarming fever at the same time. Apparently this is due to an ample supply of food and an abundance of worker bees of the right age to secrete beeswax. If these colonies are given bulk comb honey super foundation, the bees are able to use their surplus wax to build combs and seem to be content to remain at work. Under these conditions, a super of bulk comb honey can be produced profitably by those colonies operated for the production of extracted honey. This overproduction of beeswax does not last for more than ten days and then only when the honeyflow and weather conditions are just right."

Others, including ourselves, have observed bees going right up through supers of combs to draw foundation and to begin to store nectar there, apparently in preference to storing in drawn combs. It is likely that these observations were made under favorable conditions similar to those mentioned by Mr. Lyle.

It has been a common practice in the Dadant apiaries to use one or two less combs in the supers. This results in a fatter comb which we uncap flush with wood of the frame.



This practice has increased our yield of capping wax from 10 or 12 pounds to 18 or 20 pounds per 1000 pounds of extracted honey produced. Also, we find very little burr comb or brace comb constructed by the bees. We feel that we have contributed to swarm prevention through giving the bees a place to put the beeswax they are secreting by extending the cell walls and sealing the cells of honey. We also have provided a place where a large number of bees cluster and work, thus preventing congestion in the brood nest. And, in so doing we feel that we have not lost a pound of honey.

Some of us here prefer to give the bees one super of drawn combs with a baited foundation super on top. This allows ample room which acts as a swarm preventive under the favorable conditions of a honeyflow. We frequently refer to this top super as a "safety valve" for, if conditions are not favorable for wax secretion, it will not be drawn by the bees, but even then many bees are found clustered there, thus relieving the congestion of the brood area. And it remains on top for the bees to use for storage whenever it is needed during summer and early fall.

If possible use of foundation as a swarm preventive and as a means of taking advantage of the involuntary secretion of beeswax, it should be remembered that colonies must be strong and that weather and honey-

flow conditions must be just right or the desired result will not be obtained. It also is true that certain colonies are better wax secreters and comb builders than others, and it probably would not be advisable to give foundation supers to those colonies that are poor comb builders.

Thus, it appears that the secretion of beeswax is not only instinctive, occurring normally at the right physiological age of the young worker bee,

but also is involuntary when conditions are favorable for the stimulation of this instinctive process. And, the beekeeper can take advantage of this whenever conditions permit, thus adding to his production of beeswax—without losing a single pound of honey. At the same time, there is good reason to believe that he has exercised a swarm-preventive measure and has contributed to the morale of the colony.

Trends in Canadian Beekeeping

by D. R. ROBERTSON, Manitoba Provincial Apiarist

Canadian beekeeping is becoming centered in Manitoba, Saskatchewan and Alberta. Twenty to thirty years ago Ontario and Quebec produced 50-75% of the crop but in recent years their production has been little better than 25%. There have been large increases in the prairie provinces where package bees became extensively used. Increased demand for honey from 1939 to 1945 to supplement and replace rationed sugar and high honey prices attracted many to beekeeping. After 1948 the numbers dropped and continued to decline until 1955. The reduction in the numbers of beekeepers has not been proportional to the decrease in colonies as a trend towards specialization began to take place. Many small beekeepers went out of business while the larger ones were increasing. Today the majority of colonies in Canada are operated by about five hundred large commercial beekeepers who operate 300 to 2000 colonies each.

In Ontario and Quebec the number of colonies and beekeepers has continued to decline more than elsewhere. C. F. Townsend, Provincial Apiarist for Ontario explains it this way:

"Honey production depends upon a large acreage of suitable honey plants. These have been alsike clover, sweet clover and buckwheat, with basswood in some years. Sweet clover reached a peak of more than 400,000 acres in 1928, then decreased to slightly over 100,000 acres in 1947. Then it became so insignificant that records were no longer made. Alsike in 1929 approached 200,000 acres, then declined to 30,000 in 1942.

Records on acreage were dropped in 1947. Buckwheat reached nearly 300,000 acres in 1929, then decreased to about 60,000 acres in 1952.

"During this time woodlots and fence rows have been removed; most of the basswood trees have been cut down; roadside spraying killed most of the volunteer clovers; the type of agriculture has been intensified by the use of balers and forage harvesters thus removing most of the clovers as they come in bloom. Also there has been a great increase in cash crops. Too there have been gradual changes in hay and pasture mixtures. In the 20's sweet clover was recommended extensively but in the 30's, owing to increased knowledge in the growing of alfalfa and the inroads of root rot and weevil in sweet clover, alfalfa gradually supplanted sweet clover in hay and pasture mixtures. Also alsike became replaced by ladino except in poorly drained areas. Birdsfoot trefoil and ladino may completely replace alsike.

"All of this affected beekeeping. The clovers being grown now are very dependent upon good weather for honey so good honey years are fewer and farther between and the production years are much lower than they ever were before."

Similar changes have taken place in the western provinces but not quite so extensively. Beekeeping there has never reached the saturation point so honey production has been able to maintain its level and even to increase. In western Canada good production per hive and a strong demand for honey at a rewarding price has encouraged beekeeping and it has also induced beekeepers to increase the size of operations.

So, while Ontario is still the largest honey producing province, its production has exceeded that of the west-

ern provinces by only a slight margin in recent years. Manitoba, except between 1946-1950 when Alberta had an average of over 6,000,00 pounds, has been the second largest producing province. Ontario and Quebec production has continually declined for 25 years. British Columbia and the Maritime provinces produce only a small per cent of the crop and their production has not fluctuated much.

The greatest amount of honey is from clovers and it is white in color. Ontario and Quebec produce most of the darker honey, a high percentage of their crop in some years. Since 1953 Manitoba has been producing a million or more pounds of dark buckwheat honey. In 1938 Canada produced 45.7 million pounds of honey and in 1948 there was a 45.1 million pound production. The lowest production in 30 years was in 1954 with 19.8 million pounds.

Until 1940 Canada had a substantial honey export trade. Over 10 million pounds were exported in 1940. The largest buyer was the United Kingdom and the purchases were almost entirely white honey. A small percentage of prewar sales were of dark honey to Western European countries like the Netherlands and Germany. The outbreak of war brought curtailment of shipping space followed by the post war period of dollar shortages that practically eliminated honey from the export market. There is still no export market for white honey although small quantities of buckwheat have recently been going to Western Europe.

Up to 1940 imports into Canada were negligible. During the war years when sugar was in short supply and in the post war period when prices were high there was a substantial volume of honey imported, mainly from Mexico, Central and South American countries and the West Indies. With the removal of price controls and sugar rationing in 1947, honey imports again became negligible. Some of the honey imported from 1940 to 1947 was for domestic sales but most of it was utilized industrially.

From 1947 to 1953 imports were small because markets were well supplied with Canadian honey. In 1954 over 4 million pounds were imported chiefly from the United States to supplement Canadian production which was not enough to supply demand. In 1955 imports were more (Please turn to page 331)

*Summary of a paper presented to the Manitoba Entomological Society

Try This When Taking Off Honey

by G. H. Cale, Sr.

The honey house was right off the main street in town. Actually it was in two rooms that were once part of a store. The third, or front room, faced right on the main street. Two doors on the side street opened into the two rooms of the extracting set-up; big doors and high enough off the street level so a loaded truck could be backed up to either door and platforms of supers hustled off the truck using lifts, either mechanical or air. Any difference in level between the house floor and the truck bed was compensated for by an iron apron between the end of the truck and the sill of the door. Downstairs, employing all the gravity possible, were the tanks under the extractor, a coil heat unit and a pump to the gravity filter on the floor above from which the honey flowed into the big 10,000 lb. storage tanks downstairs from which the containrs were filled. It was a nice, compact set-up and handled a big volume of honey. But—the building was right on the main street and since the trucks often got in early in the afternoon and there was the usual residue of live bees on the load it was a problem to avoid trouble with people in town. There was also a second problem. If honey removal had to continue for any length of time, naturally the first honey stacked in the house went into the most remote corner and that was the honey to be the last extracted. Then, lo and behold, were those infernal webs of the wax moth likely from larvae present in the supers when they came off the bees. Sometimes this was a serious trouble.

We finally hit on the plan of killing the few bees left in the supers after they had been removed with acid right in the yard. Inner covers were nailed on empty super shells and two or three of these shells or as many as needed, were set on the ground behind the rows of hives. When a super was removed from a colony it was set on one of these shells with

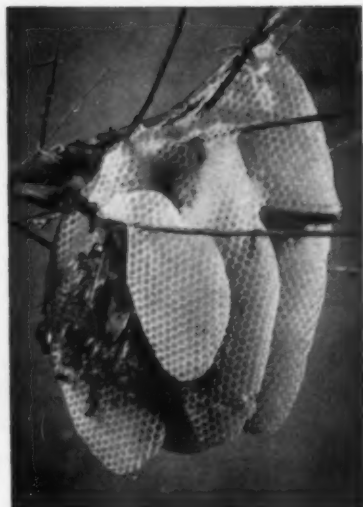
a hive tool load of cyanogas on the inner cover to which the shell was fastened. Another cover topped this growing stack. So as each super was removed and the acid board lowered, these stacks became taller until there were enough supers over the "gas boxes" so one man could walk the plank into the truck and set the supers on the platforms. There were no live bees on such a load. If robbing bothered so bees could get in under the canvas cover, we simply stuck a can of cyanogas right under the canvas as it was drawn back over the load. The operator setting supers on the platforms need not be in any danger from the gas if he handles his canvas right so he is not exposed to the gas. This bee-free load, arriving back at the house, carries no bees to bother townsfolds. Bees that may scout out the load from a near yard are few in number and a swinging door keeps them inside where a liberal dose of spray takes them out of the picture. Sometimes spray over the canvas will help too.

Then for the second trouble; storage moth. That had been a persistent problem. There seemed no way out of it, at least until last year. Then we solved it for good. In the last Journal ("One Shot for Wax Moth," page 271) I told about the use of ethylene dibromide for moth control. Elva Kirlin, one of our apiary managers, quickly saw the possibility of its use for moth in the supers of honey coming in by truck. Some question came up at first as to whether the honey would absorb the chemical enough to taint it but a few trials proved that it does not impart any flavor or permanent odor to the honey but that it does kill any moth that may be in the supers whatever their stage may be, larvae, adults, or eggs.

Now a method of handling has been worked out that seems to overcome the moth-in-storage problem. At the

bee yard when honey is being removed the supers of honey are placed on the platforms on the truck, two stacks of supers, five high, on each platform. All the bees have come off the gas boxes so there should be no bees in them. In the top center of each stack a teaspoonful of dibromide is put on a soft pad. The pad may be paper, cloth, or what have you. Then an inner cover or canvas square is laid on top of each stack. The load canvas is pulled back over each row of supers so treated. The dibromide fumes will permeate everything under the covers or the canvas and this disposes of the moth in any stage. At the honey house the platforms of supers are pulled into the extracting room where they remain still covered until it is time to extract them. Even after they are extracted and placed in storage this load fumigation has proven enough to bring them through winter and into the next season without further fumigation.

So here we have a way to control the bees brought in with the load of honey and the moth that may be present in the supers. My own preference is to fumigate the supers once more as they go into storage. And I certainly would use great care in handling these two chemicals. Cyanide, used as suggested, and in such small amounts outdoors is safe when used with caution. Dibromide is safer but still don't breathe it like perfume from a bottle. The big outdoors has lots of air in it so one would have to do something really careless to get into any trouble. When unloading and storing in the honey house the amount of chemical fumes has then been reduced to the point where there is little danger. The only possibility I can see of trouble would be with a load brought in from some yard so close that only a few minutes are needed to get to the house. Even then the canvas can be left off during the trip and there should be no trouble.



Bees Return to Nature

W. A. Stephen took these two pictures in North Carolina. The larger one was way up on the trunk of a tree in Union County and the smaller one shows a nice colony up twenty feet on a tree branch right over the sidewalk in Monroe, North Carolina. The colony and combs on the big tree is the better one as the combs are even and parallel and the bees deep seated on the combs. Very often such outdoor colonies will live through winter and occasionally swarm again the following year. No one need think that bees have been domesticated.



Help Yourselves, My Pets

Marlyn Hanson, 15, Hitterdal, Minn., noted this swarm settling on supers stored in the garage. That evening the three top bodies were taken out to the farm and set on a bottom board. After four weeks the top one was filled with honey and the lower two with brood. This "power house" went into winter with plenty of stores. Who said "A swarm in July is not worth a fly"?



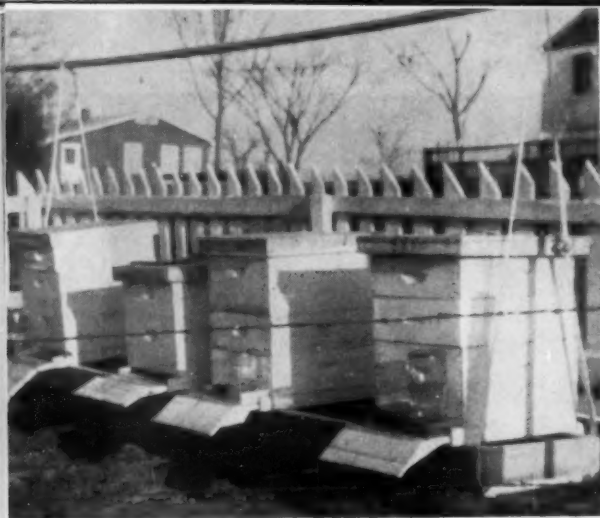
Squeeze Me, Honey

Many large packers and small ones too use a plastic bottle like this for a honey container. This 8-ounce, wide mouth, polyethylene bottle is made by Continental Can; this particular one for Superior Honey Co. In the home it serves for dispensing almost any liquid. It is fine as a container for the tool kit for ethylene di-bromide, the new moth fumigator.



Upstanding Harry

Joe Sedlak (Cook-DuPage Association) sent this picture of Harry E. Dale, president of the Illinois State Association. It was taken when Harry actually was standing up. Most Illinois meeting goers know that President Dale is really an upstanding person who does a good job as president. He is also a deputy inspector under Carl Killion and somehow finds time to run 600 colonies of bees.



The Sideline Beekeeper

I am sending a snapshot of my back yard bees. The picket fence serves two purposes. It protects small children and makes a good windbreak. Also I have been bothered with ants (both red and black) until I made this rig out of pipes (see picture). The long pipe, two ells, and two light foot pieces are put together and cemented into the ground. The bench is swinging six inches from the ground supported by small iron rods. This solves the ant problem.

T. A. Carter, Candler, North Carolina

Sideline Observations

by Herbert Studier

I will never forget the day in October, 1939, when the old Rev. F. O. Stachling of Myrtle, Minn. pulled up to our place with two single-story 8-frame colonies of bees in the back seat of his car. The old gentleman was retiring from the ministry and was not in good enough health to continue in the bee business. Two colonies was all that was left of what was once a sizable sideline business. During his lifetime of raising a family of ten children, the bee business had its place in pulling his family through lean years.

I can remember different members of the Stachling family remarked about how they helped their dad extract honey and what a mess it was. Many a time I heard Mrs. Stachling tell how the water reservoir on her old kitchen range was cluttered the whole winter long with pails of honey to liquefy.

After that memorable day in October, however, the two colonies were mine, with no strings attached. I was proud of them but I felt so inadequate in the task of caring for those bees. I was only fifteen and very inexperienced in the ways of the world, especially the world of beekeeping, but I was determined to learn.

Perhaps one reason I was so enthused about the bee business was that I loved honey. When the Reverend brought those two colonies of bees to our place he also brought along a few slabs of comb honey which I for one helped eagerly to devour. We put the honey in our basement (a



poor place for comb honey) but it was gone long before it had a chance to ferment.

With the two colonies unloaded and a few last-minutes suggestions by Rev. Stachling I was alone with the bees. I asked dad to help me and we put them on a low table outside the southeast corner of the woodshed and covered them up with about two feet of straw leaving the fronts open but contracted with entrance blocks. These single story colonies were heavy and they made it through winter (lucky for me).

As little as I knew about bees I knew that these were black and mean, so I ordered one Italian queen to replace one of them. When the queen came I scarcely knew how to begin.

The two colonies were now on summer stands and I had plenty of room around them to work, so with home-made veil and a good smoker blazing, I proceeded to dismantle one of the hives. I must have received dozens of stings but I worked the biggest share of one forenoon and finally found the queen, never having seen one before in my life. I had bees scattered everywhere but I had found the queen!

I did not have the heart to kill the old queen so I put her in a little nuc for a while. After putting the combs back into the colonies, the new queen in her cage was slipped into the entrance. A week later she was not released so I gave the entrance a puff of smoke and ran her in. Whether she was successfully introduced or not I did not know but I started counting the days to twenty-one and then began looking for the yellow bees I figured should then be emerging. They started making their appearance in due time but it wasn't until well into the summer that I began again looking into the colony. I did add supers to this one but the other colony was not faring so well. Examination revealed that wax months had just about taken it over but there were some bees still remaining so I ordered another queen as I had heard that Italian bees would fight wax moths. This was in July and by mid-August Italian bees were emerging in this moth riddled colony. They put up a valiant fight and just about had the moths cleaned up by frost.

The colony I requeened earlier made 75 pounds of surplus honey (or at least I thought it was surplus). The moth infested colony was too weak and to light to try to winter so I had to dispose of that one. My 75 pound colony starved after an unorthodox attempt to winter it inside that same woodshed. From time to time I would open the wooden shutter to let the bees fly out, but most of them never made it back to the hive inside.

So, in 1940, I had to start completely over with packages. Six Caucasian packages arrived from Texas just as dandelion began to bloom. With only foundation and one five pound bucket of syrup to each of them they were off to a wonderful start.

Build-up conditions were excellent and withing ten days all six colonies had one story about drawn out and brood in several combs. They came along so well that soon three of them had swarm cells. I mistook them for supersedure cells and so thought the queens were failing. But how wrong I was.

The shipper had good naturedly replaced the three queens which I put in the place of the three "failing" ones. I will never forget that one of these colonies was boiling over with bees and had 97 jelly-crammed swarm cells. The season of 1940 resulted in around 600 pounds of fine clover honey which I retailed and this put me well on my way into the bee business. I had the bee fever right

and have never lost it to this day.

Besides lying around by the entrances watching the bees come and go I was gathering as much reading material as I could on the subject of bees. I will never forget my visits to neighboring hobby bee men some of whom knew no more about bees than myself.

What started out as a two colony hobby has developed into a 2,000 colony partnership, north and south, which is now taking care of my wife, myself and four children and also my brother, his wife and five children.

Minnesota and
Georgia

Honey Gets Attention In The Modern School

by a Maryland Teacher

(Miss R. S.)

With more and more attention to foods for health and nutrition, the modern school continues to include emphasis on foods good for children. Honey is more and more being used, in school cafeterias, and in the studies of the curriculum. Because it is tasty, and a naturally good, unrefined food, a source of energy, easily digested, and one which satisfies the child's need and craving for a sweet, honey has a definite role in the offerings of the modern school lunch program.

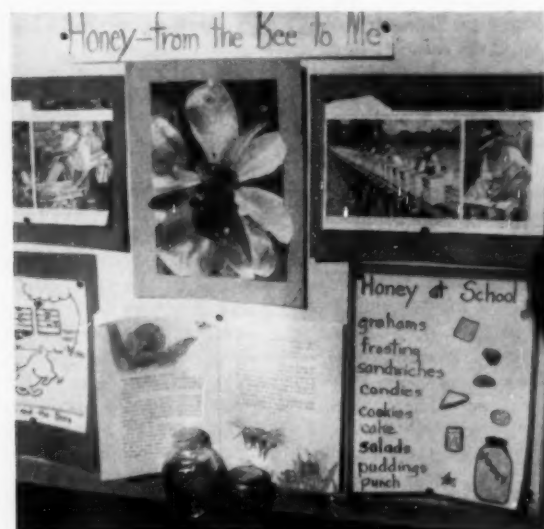
Honey grahams, and honey-peanut butter spreads for sandwiches and

cookies, are popular. Children learn to like honey in positive ways, by beginning in their early years to enjoy its wholesome goodness. A very tasty candy is the honey-peanut butter "ball," and honey-butter cream candies. Cakes with honey frostings are well liked, and cupcakes and cookies using honey are also popular. Wherever possible, honey adds an extra special goodness to salad fruits, punch party drinks, candied sweet potatoes done with honey and butter, and even honey-ed fried chicken and turkey. All the wonderful honey flavor some-

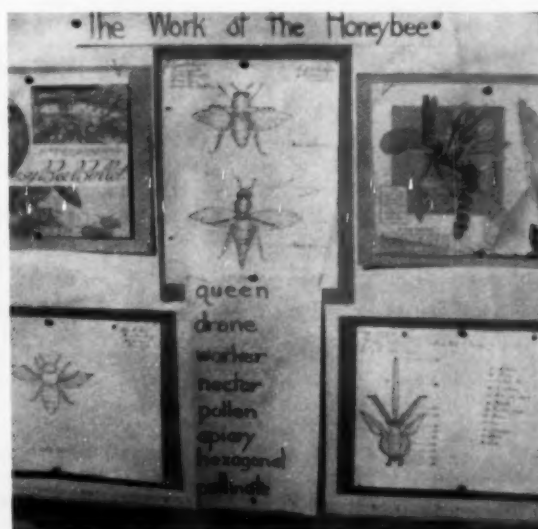
times is substituted for molasses or other sweets, and is delightful, and a change.

Children include attention to honey's importance when studying foods in their classrooms. They tell about honey on cereal, toast, and on grapefruit. They report making honey candies, and like to chew the "beeswax" from the chunk-style honeys. The children are fascinated to learn of new ways it can be good for them. They like "to honey up"

(Please turn the page)



School exhibit - from the bee to me, emphasizing the use of honey in school lunches.



The work of the honey bee, just how she improves each shining hour.

various other foods, and honey imparts a fine new taste. Honey candy bars are a favorite in school lunch kits, too. One tot said his dad "seasons" a new pipe by first letting some honey dry in it! Attention to honey may come about on the school scene quite incidentally. It may be that it is an outgrowth of a study of bees and how they produce their wonderful product. Or, it may be part of a study of pollination, and plants. Stories of honey as a food as far back as Biblical times, and in mythology, fascinate youngsters. The "food of the Gods" was nectar. They read of a Jewish custom of tasting honey off a book, for "learning" better. The children at different grade levels may approach the subject in many different ways. An older group may intensively study the work of the apiarist and the packaging and selling of honey on the market today. Where possible, an apiculturist is invited in, to speak to the children. One class observed parts of the honey bee under microscopes and drew sketches. Others used films, texts, and picture materials from the magazines, and local newspapers. Many children lived close to apiaries, yet knew little about the work required. Listing the kinds of honey available, and new vocabulary terms such as "nectar," "hexagonal," "honeycomb," "apiculture," "apiary," and "apian," are other correlated activities. They are surprised to learn that the range of flavors depends much on the blossoms available to the bees. The almost miraculous job of the bees in constructing their product is discussed and viewed closely. Perhaps the best part of the lessons is the time everyone is served some various kinds of honey to enjoy! Facts about honey's values are discussed. Some report it helps their sore throat, and builds blood. They also get a deeper appreciation of the fact that honey is not just "honey," but can be used to enhance many foods. When honey is mentioned as a part of the cafeteria's menu, on a particular day, children usually find it more appealing to buy the lunch that day.

Some original chart stories are made in primary grades about honey and the work of the bees. Children also enjoy fictional stories about bees and wild animals, note the displays at local state-wide fairs, and talk about bees, and use musical and dramatic sketches about them. One little primary game has a mock-up beehive, and children who are counted as

bees. Another activity is the music, "Flight of the Bumble Bee," as rhythms-work. A child who had a little film called "In Honeyland," showed it to his class. Some clay models were made of hives and bees. Honey jars with their lovely hexagonally-patterned glass often became fine vases for the classroom. Parents appreciate in-school honey learnings, as they are glad their youngsters are interested in a new and more healthful sweet. Children have at times thought of bees in general as creatures who "sting and are to be feared." Another good outcome of the in-school honey studies is that they have more respect and less fear, and learn how the apiarists care for their bees, and how the honey is obtained. One group read how the honey bees enjoyed a basswood in blossom so much that they literally made it possible to "hear the tree" as well as smell it! And all children are fascinated to read of apiarists who use airplanes to transport their bees to various places where the best blossoms can be had. They also learn how the bees contribute to our fruits; and that without them, there would be few if any. Some children claimed to be "connoisseurs" of honey, and felt they could tell which type of blossoms the bees had used, for their nectar, in producing a particular kind of honey. Perhaps the greatest interest in honey, aside from its appealing flavor, to children, is the almost magical things that seem to surround the production of it: the changing of nectar to honey; that tiny insects can do such a task; and, that the hexagonal pattern is so much an architectural feat of nature! The May issue, 1956, of *Farm Quarterly* magazine, provided a teacher with a most beautiful close-up in color of a honey bee busy on an apple blossom. This picture motivated a class into their studies of the bees, and furnished realism for the class.

Though the majority of younger children seemed to favor plain honey, or honey with peanut butter, many of the older students reported a liking for honey butter and honey cinnamon spreads. Some groups prepared honey dishes as part of classroom studies, and for parties. A "honey quiz" could include questions about facts learned, and honey as prizes. Fascinating pin looking like real honeybees was one prize for a girl. Some art class pupils used beeswax in making candles, and it gave a fine

fragrance. The chunk-style of honey provided something good to chew. The bright, golden color of honey appeals to children, too. Its pure natural goodness seems to make it appeal to them. Many children knew about honey, but until the studies, were not eating it. As some say, "Honey is a honey of a treat!" Activities are always interesting. A glance about the primary grade classroom may show this:

"Here is a beehive, where are the bees?"

Hiding away where nobody sees,
Watch and you'll see them,
Come out of the hive. . .

One, two, three, four, five!"

(children come from under desks.)
(or a fist is a hive, and fingers "come out" as bees.) A poetry lesson, while bees and their work were being studied, yielded these bits of verses; from older students:

"Creature of buzz
With body of fuzz
Wiggle your feeler
For the bee dealer."

"Your honey sacs fill
Wherever you will,
And I surely do pray
You'll work all day."

"Buzz, bee, buzz
And help make the honey
For it tastes good
And brings in money!"

The various tasks and activities of the entire bee "colony" are studied and discussed. Children note that the insects must work together for the almost overwhelming amounts of honey produced. In the lower grades, some understanding of this teamwork is derived from dramatic activities. One well liked is when the group divides up into bees and flowers, and the bees visit the flowers, and do this all to rhythmical music. Play-time grocery stores often have honey included in the "products" to be bought and sold. Muffins, honey with cottage cheese, in salad dressings, and in puddings, are newer ways of using honey with children. Whatever the new use for honey, children are more receptive to it because of the positive introductions to it. They especially delight in using it in place of syrups and molasses, for taste treats with waffles, pancakes, and cereals. Honey is truly a versatile food. Perhaps it needs more publicity and more teachings before an even wider acceptance is had,

among school children. It is possible to hear honey mentioned not only in science or food units, but even in arithmetic class, for costs, problems of the beekeeper, estimates and the hexagonal form. Art class finds beautiful and realistic sketches of the hives; models, and colorful posters about bees and honey. Whether the

in-school honey studies reach back far into the early days of history, or whether the topic is using honey in modern times, children are impressed with the processes, the golden goodness, and the fact that honey offers a "sweet treat" that is, *by nature*, good for them!

Salt peter Rags For Smoker Fuel

Homer Tate, inspector of bees for Mississippi reports one of the Mississippi smaller beekeepers had heavy losses of bees when using salt peter soaked rags in his smoker. Half pound of salt peter to a gallon of water was the solution in which the rags were dipped. Dr. Miller (Fifty years Among the Bees) used rags in a similar solution (1/4 to 1/2 lb. to a

gallon) for years and had no trouble.

Tate says a chemist friend of his suggests that in very moist circumstances nitric acid and nitrous acid is formed when the salt peter is burned. Thus the trouble.

Truckload Of Bees Crash

The Bloomington (Ill.) Pantagraph reports a crash of a truckload of bees on its way from Georgia to Manitoba on Route 150 near there.

The owners and drivers Mr. and Mrs. Ernest Cochran of Elm Creek, Manitoba were hospitalized when their truckload careened off the highway. Local beekeepers including Oliver Luerksen, Homer Wegel and Ed Heldt, helped straighten out the traffic jam, with many passers-by stung. Many of the packages were saved by the above gentlemen with their recovery by the owners when they were again able to travel to their destination.

A Thousand Pardons, Ben Knutson

"Relocation in Swarm Control," page 274, July, was credited to Joe Moffett. Shame on us. It was taken from the Colorado B-Notes, edited by Moffett, but the piece came from Ben Knutson, Alamosa, Colorado. "So sorry. Do you want a silk hat or a new tie, Ben?"

A BEEKEEPER IS BORN

by John Morden

Eleven year old Paul Delling wanted a hive and some bees. Paul was in a group of Scouts my wife and I were teaching beekeeping to this past spring. Before the requirements for the merit badges were completed he was begging his mom and pop to let him keep bees. They promised him a hive with foundation, veil and gloves and smoker when he passed his examination. He passed about June first.

We helped him capture a swarm of about three pounds of bees on the 5th

but we found after about three weeks that the queen was not laying well and advised him to send for a new hybrid. With the new queen the bees really started to go. They filled the double bodied hive and gave him a super of surplus honey, right here in Missouri where our average is only 20 to 30 pounds to the colony.

Paul had no trouble selling his honey at a nice price and we think selling is a vital link in beekeeping. These cold days find him planning for increase and a bigger and better

honey crop.

So a new beekeeper is born and the good news of bees and their wonders goes on to the younger generation.

Glendale

Missouri

(The Boy Scouts of America have a new merit badge for beekeeping. The instruction book is a beautiful job, fine pictures, easy to read, nice type, good titles, about 75 pages. You can get one for 25c from the National Council, Boy Scouts of America, New Brunswick, N. J.)



Paul and his swarm that started him into the realm of the honey bee.



Paul's harvest, sold by him at a profit for his initial venture.



The Beginner and His Bees

Edited by

W. W. CLARKE, Jr.

This little girl, Dawn Myers, daughter of M. D. Myers, Brookneal, Virginia, is now several years older than she was when this picture was taken. Her unusual curiosity may be rewarded, the wrong way. All the Myers family are honey lovers. In fact, Mr. Myers' doctor some time ago put him on a honey diet and his improvement was such that he has acquired a good sized apiary. He is an instructor in Vocational Agriculture in the Brookneal High School.

From Joe Robbins
Signal Mountain
Tennessee

► I would like, to know what kind of disease my bees have. They are weak and not able to fly. Since their bodies are not swollen they must not have dysentery. But whatever it is it has resulted from starvation through the winter. They can stand up but have trouble moving their legs. Where is the best place to send a sample of them to be diagnosed?

Also, what are the requirements for honey before it can be sold?

I do not know of anything to improve your department. Beginners should become interested and ask you questions when they need help. I enjoy reading your advice and I get something new from practically all of it.

Answer: It would be difficult to tell you why your bees are weak and unable to fly. There are only two adult diseases in this country which we recognize as doing much damage: Nosema and paralysis. Nosema is caused by a protozoan known as *Nosema apis*. The spores are found in the digestive system and can be seen with a relatively low-powered microscope, about 400 power. The symptom is the inability of the bee to fly, and many will be seen crawling on the ground at the entrance of the hive. Actually very few can detect Nosema by appearance. A microscope is a must.

At the present time, there seems to be no positive cure for Nosema al-

though Fumidil B has been used with some success, especially in the queen rearing and package bee business.

The cause of paralysis is apparently unknown, although at least one form is caused by a filterable virus. The symptom of paralysis is weakness accompanied by trembling, sprawled legs and wings. The bees may be hairless, or have a dark, shiny or greasy appearance of the abdomen.

Paralysis often disappears of its own accord but some success has been reported by removing the queen and allowing the colony to stay queenless for a period of about 10 days and then requeening.

Samples may be sent to the Beekeeping and Insect Pathology Section, Entomology Research Branch, Agricultural Research Center, U. S. Department of Agriculture, Beltsville, Maryland. Mail in a strong cardboard box. Don't wrap in cotton. The bees should be alive and fresh. Send about 50 specimens. Your Inspection Service at the State University may be able to give you the same service.

The legal requirements for the sale of honey are very few, usually only a label stating that the contents is honey with the producer's or packer's name, address, and the net weight. It is up to the producer to see that the honey is the best quality and the containers are attractive and clean. There are steps being taken in some areas to inspect the honey houses and packing facilities to try to insure a better product on the shelves.

From Wayne Ziegler
Valparaiso
Indiana

► Is it possible to remove a colony of bees from within the walls of a house without doing any damage to the house? The bees have been there for about three years. Do you think they should be requeened after being hived?

Answer: Yes, it is possible to remove a colony of bees from within the walls of a house without damage to the house, but you will need to give them a new queen since the old queen is not likely to leave the nest.

The usual procedure is to use either a bee escape or a cone made of screen wire placed over the opening in the house to allow the bees to come out, but not to return to the house. The smaller opening in the cone will be large enough to let a bee come out, but the sharp wires should prevent them from going back in. You should place a hive next to this opening. The hive should contain a frame of brood with a laying queen or a queen cell along with frames of drawn comb if possible. The bees returning from the field when they are not able to get back into the house will enter the hive. This trap and hive should be left in place for about 30 days; by the end of this time most of the bees will be out. At this point some beekeepers will kill the bees that remain in the house with sulphur fumes or Cyanogas, and then permit the bees to rob the honey from the house.

It is important that all but the one entrance be closed since bees will find them all and not use the trap.

Unless the bees are in an accessible place, I would not try to trap them out, but would rather destroy the colony with such dusts as lindane or chlordane. Such a swarm of bees is not worth too much risk.

There are many variations and refinements to this arrangement, but all do about the same thing in the long run.

From Herbert Figgins
Suring, Wisconsin

► I am a carpenter by trade and at present have three colonies of bees as a hobby. I plan to quit carpentering and go into beekeeping, perhaps on the west coast, in Washington or Oregon, where the winters are not so long. To whom would I write for information on open space for another beekeeper, regulations and so forth?

Does anyone have a hive lifter, light enough for a man to cart around in the bee yard, yet strong enough to lift several supers and swing them to the side to allow inspection of the brood nest? Or will such a device be of little help?

Answer: Your best bet to get beekeeping regulations and possible locations would be from your State Inspector or Extension Apiarist; I would contact both. In Washington, the State Inspector is Martin Peterson, Bow, Washington. The Extension Apiarist is Carl Johnson, Pullman, Washington. In Oregon, the Inspector is Kenneth Goeden, Salem, Oregon. The Extension Apiarist is W. P. Stephens, Corvallis, Oregon.

I do not know of any good hive lifters that are available on the open market. I have heard and read of several which I suppose will work, but I have never seen them in operation. I am still sticking to the "arm strong" method, I believe it is quicker. Many hive lifters and much other special equipment are made by individual beekeepers to meet their particular needs and conditions. The lifters are apparently of some value since many beekeepers seem to work on the problem.

I think, if you use shallow supers, there should be no need for hive lifters unless you plan to migrate your bees; then it is at least a two-man operation.

From Kurt E. Simon
Webster Groves
Missouri

► I would like some information about drilling a hole in the hive body for wintering the bees. I hear so

many beekeepers say that it is important to do this. Why don't the bodies have the holes made in them by the manufacturer?

Answer: Your question regarding a hole drilled in the hive body is a good one. Although, we think it is important as a means of helping to ventilate the hive in the winter to get rid of excess moisture, and also as an upper flight hole in case the bottom should get clogged, we find that all beekeepers do not agree as to how to get extra ventilation. Some build a frame with a hole in it to go between the hive body (or super) and inner cover to get the same results; others put small strips of wood shingles under the inner cover; while still others disagree as to the location in the hive body of this hole. Since some of us use hive bodies for supers, we do not need the hole in all of them.

The manufacturers use a couple of other methods: one has a ventilated insulated lid, while another has a piece cut out of the inner cover. Personally, I prefer the $\frac{1}{8}$ -inch auger hole drilled just to one side of the hand hole; this should be plugged in the spring. The manufacturers could drill the hole, but I am sure many more beekeepers would rather have it some other way. I guess we will have to continue to drill our own.

From George E. Reynolds
Norcross, Georgia

► I have several questions about the use of a queen excluder. My bees do not seem to pass through the excluder freely. I have tried leaving it off until the bees fill out the comb in the first super and have it about half capped. Then I added the second super above an excluder but there seemed to be fewer bees above the excluder each time I looked. This year I added another hive body and left the excluder on with two supers above. The bees completely filled the two bodies with a minimum amount of honey and lots of brood. But I did not move the excluder. Then I had a very large swarm, maybe ten pounds of bees. Even so there were very few bees in the supers above the excluder. Is it possible that my bees are too large to pass through the excluder? What would you suggest to remedy the trouble? I have Caucasian bees. Last year, when the honeyflow was over, I removed one super and fed the honey back to the bees. The honey had not been capped in either super. I removed the excluder. Then they completely filled the super I had

left on but they did not cap but about one third. They had a month before frost to do this. What would have happened if I had just left off the excluder?

Answer: The queen excluder is discussed and cursed about as much as any piece of beekeeping equipment used today and I am not sure there is an answer to its use.

We think it's a good piece of equipment, but it does seem to require some skill to get the most value from its use. It is my opinion that too many are used too early for good beekeeping and while many colonies will continue to work through them, there are just as many that refuse to work and will swarm as yours did.

I doubt that your bees are too large to pass through the queen excluder. Here is my suggestion, and I am sure there are many who will disagree (at least they do here in Pennsylvania). I would forget the queen excluder entirely until almost the end of the honeyflow (two to three weeks). At this time I would see that the queen is in the hive body and place the queen excluder directly above the brood nest. This will give any brood that is in the supers time to emerge so that the cells may be filled with honey; it isn't likely that the bees will desert the supers or swarm at that time.

Actually, with smart supering, you could probably eliminate the queen excluder entirely. Here you would add supers on top of the stack as the last one is well started, but a week or two before honeyflow normally stops or as it slows down, stop adding supers; if there is brood in the supers it will be replaced by honey and the queen will be pushed down to the brood nest.

In my own beekeeping, I don't use a queen excluder, and although there is a little brood in my supers once in awhile, I put these frames down into the food chamber and take out a frame full of honey.

Only last week these two comments were made in a discussion on queen excluders: "You mean honey excluder" and "The best use for a queen excluder is to place in front of a hive to keep down grass." Neither statement is necessarily true, but you can see others have the same problem and I think you have answered it yourself when you suggest not using queen excluders. In areas where the honeyflow is long and slow, then queen excluders must be used or all the honey goes into brood rearing.

- Science and Industry -

SCIENCE EDITOR

DR. WALTER ROTHENBUHLER

Iowa State College,
Ames, Iowa

INDUSTRY EDITOR

ROBERT BANKER

Cannon Falls, Minnesota

Taking Out The Stinger — Adding The Buzz

President of Albemarle Beekeepers' Association
Manager of radio station WCHV, Charlottesville, Virginia

by Charles H. Smith

When a person gets an opportunity to voice his problems, such as Mr. Maxwell has given me today with an overall topic of: PROBLEMS OF THE LOCAL ASSOCIATION, you can be sure that you'll hear about a lot of woes, troubles, and sorrows . . . and, I hope, you will also hear some suggestions on how we can take out some of the *stingers* in our local associations and add some extra buzz.

Problems! Yes, we have problems. As president of the Albemarle Beekeepers Association for the past two years, I have found that we local associations DO have problems. As I list some of ours, see if your local association doesn't have some similar difficulties:

1. *Poor attendance at meetings*—Some of our members say they didn't get the notices in time, or they got them too early and forgot. Some say they live too far away, or weather was too bad, or parking facilities weren't adequate. At any rate attendance is down, and that leads us to the next problem:

2. *Meetings are uninteresting*—We see the same old films, hear the same old speakers, talk about the same old topics. Some members suggest more refreshments, more sociability among members.

3. *No one wants to be an officer*—The job of president, or secretary is no longer an honor in the local association, it's a thankless task. There are no volunteers for jobs, and only refusals on appointments. If a committee is appointed to make a report, you never hear from them again.

In other words, **WE ARE IN A RUT!**

On the good side, I can say this: Our local association has a very high membership of people who pay dues, but don't come to meetings. We have a number of members who are talkative, interesting, expert beekeepers, but who just don't have the time or energy or interest to make the Association stand up on its hind



legs and fly! Now, you say, your local association is different! you have good attendance . . . everybody enjoys getting together and talking about bees, and having a little refreshment on the side. Did they come to those meetings to fulfill the OBJECTIVES of your local association, though, or to fulfill some personal objectives of their own?

I believe that our ALBEMARLE ASSOCIATION is an honest *shell* of the real problem that faces ALL beekeeping associations: local, state, and national or regional. And that problem is THIS: There is no real understanding or working toward the basic purposes of the beekeeping associations. And what are those purposes? THIS:

"To join together, as beekeepers, for the purpose of *exchanging ideas*, information, and experience in beekeeping; to foster the business, art and science of beekeeping and help it grow."

(And, I might add that this purpose applies to beekeeping for profit, hobby, or profitable hobby.)

Neither the *average member* of the average association, nor the *average association* is fulfilling what might be considered the general purpose of

a beekeepers' organization. Check this list and see whether your association did any of these things last year; or the year before:

1. Had representatives attend an outside organization and present a speech or talk on bees.
2. Had a representative speak on radio, or appear on television about bees.
3. Got in the newspapers, or other publicity medium, other than just to announce a meeting.
4. Held a honey show.
5. Held an old fashioned beehunt.
6. Honored longstanding members, or beekeepers.
7. Brought in outside speakers on bees or related topics.
8. Showed new or recent films on bees.
9. Conducted a cooking contest using honey in the recipes.
10. Made plans for setting up an observation hive in a school or other public place.
11. Held a field demonstration.

With the exception of conducting a honey show, the Albemarle Beekeepers' Association has done those things at least once each in the last two years, yet we can see little or no progress toward fulfilling our purpose; since all the effort is being made by a handful of members and there has been no growth in beekeeping interest.

The answer to this dilemma, I believe, lies in a need to change our immediate methods both association-wise and memberwise: *In the Association*: I believe that these things can be done to meet the purpose:

1. Organize the association for contacting and selling more people on taking up beekeeping.

Set up a plan, whereby every member tries to get another member, by selling him on bees and beekeeping and bringing him to meetings. Instruct the members to SELL BEES on these lines:

A—Beginning with bees is EASY, we'll help you

B—You can LEARN and EARN from bees

C—Tell them why you got into bees. The REAL reason, not the glamorous reasons. (Beekeeping is glamorous, because it implies courage in the face of possible stings. Don't tell them they'll get used to bee stings but stress the advantages of bees.)

D—Explain with an observation hive!

E—Sell the newcomer on the fact that it costs less than \$40 in most cases to get started with a hobby that will definitely pay him back.

F—Tell him it takes less time than other hobbies, no messes to clean up like in keeping chickens.

G—Tell him the disadvantages, too, but go easy—let him know that you'll help him all you can to get him started and afterwards, too. He won't be stabbing in the dark.

2. Set up committees to follow up leads on new prospective beekeepers. Call on him, show him your bees; let him know that not just one person, but a whole GROUP will back him up, when he gets underway.

3. Publish a newsletter to ALL members, welcoming new beekeepers, keeping members posted on local developments, problems that have turned up, appeals for help, questions and answers. Put the newsletter out as often as you have information to fill it up; but make sure it's often.

4. Skip the meetings until you feel a general need to have one. Put more work in committees, then call your meetings. As the new interest is developed with new beekeepers, then start your meetings, using the best beemen available to answer discussion problems.

5. Contact manufacturers and work out plans whereby for each bonafide new member who buys their equipment, the member who sells gets a new shallow super or similar incentive.

6. Take advantage of ALL FREE publicity, newspapers, radio, television. They want human interest stories on bees. You want your association to have the publicity.

7. Increase the dues, if need be. That will accomplish one purpose at least: It should get out the deadwood in the association, and make it a worth-while thing for him to either get out of, or get into.

Those are just a few of the many possibilities that come to the imagination, when you think about fulfill-

ing the purpose of the association through bringing in new members locally. The state associations, as well as regional and national, have the same sort of job to do, except on a larger scale: Their job is to inter-organize. To sell the locals on much the same basis as the locals sell the new members. And, I believe that the nationwide associations, the regional, and the local should be thinking right now in terms of helping the local get on its feet, before contemplating grand scale promotional plans. Give real help: Just like the local is giving the novice beekeeper.

Now, let's take a look at the other party involved. We've talked about the group's responsibilities in fulfilling the purpose of the beekeepers association, but in the end it's the MEMBER who has to make the greatest effort to make the whole thing work. And, he should instill in himself every word of the purpose for which he joined the association:

First: *To join together . . .* The simple act of joining together indicates a willingness to learn from others, give to others, help others in the same group. Be a friend to every other member. Forget individual personality differences to meet the common purpose of teaching and learning the art of keeping bees.

To join together . . . for the purpose of exchanging ideas, information, and experience in beekeeping. This works two ways: 1st, we must be willing to ask questions when we don't understand . . . and 2nd, we must be willing to answer questions when we do! This is a particularly hard requirement for the beekeeper who is primarily interested in profit rather than pleasure, since he may feel that he would be giving away professional secrets by answering puzzling questions on beekeeping, and thereby possibly lose a business advantage. The most appropriate thought to remember here is that it is better to give than to receive. A beekeeping association is very much like a trust fund formed on the basis of mutual investment, with the end idea of receiving mutual dividends. The more you put into it, the better off your dividends will be. Similarly, if you're not willing to make an investment of time, effort, and help; don't expect to make any dividend withdrawals.

. . . To foster the business, art and science of beekeeping and help it grow. Bees have been here on earth long before man was created and

they'll probably be here after man meet his' creator, but you and I are sharing today in the progress of centuries in the keeping of bees, and that gives us a responsibility to both the present and future generations to foster beekeeping and make gains in the knowledge we have of it.

Whether you want to or not, if you keep bees, you are taking an active part in CREATION. See any standard list of products from beeswax, food value in honey, or pollination efficiency of the bee, and you can realize that your bees are taking part in CREATION. They even create money, pleasure, and other advantages for YOU. The extent that we realize the *benefits* we receive from bees, is the height of proficiency we attain in beekeeping . . . that distance which we go toward mastering the ART of keeping bees. In contemplating the MASTERY of beekeeping, it is fitting to remember that the greatest of the MASTERS in history, *Jesus*, spent the entire last years of his life on earth in *teaching* . . . bringing to others the Good News. And from the small association of 12 men, whom he chose to help him, that gospel has grown to worldwide stature today.

It is not too late for us to learn NOW that what we do today in the interest of beekeeping can spread and grow . . . But it is up to each of us, individually and joined together in our associations, to realize our purpose and our responsibility with bees:

"To join together, as beekeepers, for the purpose of exchanging ideas, information, and experience in beekeeping; to foster the business, art and science of beekeeping, and help it grow."
Virginia

Honey Exports 1957 U.S.A.

Out of a total of nearly 20 million pounds of honey exported in 1957, more than half or 11 million pounds went to West Germany. Canada took 4¼ million pounds, Netherlands and Belgium each took about 1½ million pounds.

In the same period nearly 5 million pounds were imported into the U. S. mostly from Mexico, with Guatemala next.

Beeswax imports in the same period totaled 5 million pounds.

Milkweed and the Honey Bee

by John H. Billman

It is common knowledge to many beekeepers that the milkweed plant is responsible for the loss of many honey bees in regions where large numbers of these plants are found. The explanations that are generally given for this unfortunate situation are that the bees' legs get caught in a blossom and if they are not strong enough to free themselves they remain attached to the blossom and slowly starve to death. The stronger bees are able to liberate themselves, however, and in so doing they carry away parts of the milkweed blossom attached to their legs. If enough of these become attached to the legs of a bee it eventually dies as a result of becoming helpless or crippled. Other insects as well as honey bees lose their lives this way.

On numerous occasions I have noticed bees struggling to free themselves from milkweed blossoms and in several instances I have helped to liberate them. In some cases it was much more difficult to do than one might expect.

This unusual situation arises from the fact that the blossom of the milkweed plant has a peculiar structure. Each blossom contains narrow slits



Climbing milkweed, *Gonolobus Laevis*, one of our best honey plants, source of fine table honey.

between the anthers which are fused into a ring around the pistil. Across the top of each of these slits is a tiny structure generally called the pollen disc. Attached to these discs are two masses of waxy pollen grains, the pollinia, which extend down and straddle the structure which forms the slit. As the bees walk over the blossom their legs get caught in these tiny slits and the only way that they can get them out is to have sufficient strength to pull them up through the slits. In so doing, the legs are guided up to and between the V shaped structure containing the pollen discs and the pollinia. As the bees break loose they pull these parts from the blossom which remain firmly fastened to their legs.

Last summer while visiting in Virginia I took care of two stands of bees and had plenty of time to observe them rather closely. In the section where I was staying there was an abundant supply of milkweed plants; and at just about the time that the milkweed honeyflow started I noticed that the bees became restless and did a lot of fighting on the landing platform. Upon close examination I noticed that all of the fighting was with bees loaded with pollen discs,



Common milkweed, *Asclepias*, traps bees with its pollen discs.

etc., from the milkweed blossom. Bees with only a few, maybe four or less, fastened to their legs were not bothered as they entered the hive. However, when those bees carrying a large number of discs tried to enter the hives the other bees immediately pounced on them and drove them away. This behavior continued for days until the height of the milkweed blossoming had passed. There was no indication of robbing taking place during this time since the fighting took place only with bees heavily loaded with parts from the milkweed blossom. Never before have I noticed bees with so many pollen discs fastened to their legs. It looked as if each bee had dozens of feet or spurs. Those bees that were driven away, as best I could see, tried to return but were never accepted and apparently went off to die. Since there were so many bees in this predicament

I am inclined to believe that large losses in bee population due to the milkweed plant are not caused mainly by trapped or crippled bees, but due to a very large extent to the fact that the bees are not accepted by their hive when they return carrying large numbers of pollen discs and pollinia attached to their legs.

One way to account for this unusual behavior is that the large number of pollen discs etc. on the legs of the incoming bees gave them an unnatural appearance to the hive bees as they did to me. The guard bees apparently looked upon them as strangers and thus fought them off as they would other insects. This behavior might suggest that those bees who guard the hive use not only smell but also appearance when deciding on which bees may enter the hive.

like caves and enjoyed only their company (but not the cave) on that trip.

Yes, that was Bob Foster all over. An earnest man at his job and a delightful companion whether squirrel hunting, visiting, or just whiling away the time. He has made his impression on the beekeeping of his era, generally, as well as in his inspection work and in isolation of parafoolbrood in his territory.

M. G. D.

BOREN TO BECOME STATE APIARIST OF KANSAS JULY 1

Roger B. Boren will become State Apiarist of Kansas, effective July 1, 1958. He will replace Dr. R. L. Parker, who has been State Apiarist since 1912 and is retiring June 30. Mr. Boren came to Kansas in September, 1957, and has been assisting Dr. Parker since that time. The State Apiarist is appointed by the Kansas Entomological Commission to administer the state laws pertaining to apiary inspection and regulation of bee diseases.

Mr. Boren graduated with the B.S. degree in 1953 from Mississippi State College. In the fall of 1954, he returned to Graduate School at Mississippi State for one semester, at which time he received a commission in the Medical Service Corps, U.S. Army as a Medical Entomologist and went on active duty at Fort Sam Houston, Texas. There he was Medical Entomology Instructor in the Preventive Medicine Technician Course at the Army Medical Service School.

He was separated from the army in February, 1956, and worked for a pest exterminating company until September, after which he returned to Mississippi State and graduated with the M.S. degree in Entomology in August, 1957.

His thesis was concerned with various approaches to the control of *Nosema* disease in honeybees including the effect of *Nosema apis* on package bee production, and the control of the disease in the yards and during shipment.

Crimson Clover Seed Crop

According to the U.S.D.A. the crimson seed crop is above last year's small crop though below average. Total is 13 million pounds as against 10 million pounds in 1957. In the same year imports of crimson clover seed were 2½ million pounds most of which came from France.

Robert E. Foster

Robert Enoch Foster of Gainesville, Fla. has passed on at the age of 78. Born in 1880 in Wisconsin, Foster emigrated to Colorado where in 1910 he did his first inspection work in Montrose County.

In March 1922, he and his family moved to Florida. He proceeded to raise honey in Florida until 1925 when he was appointed State Bee Inspector by the Plant Board, which position he held until 1948 when he resigned and was succeeded by H. S. Foster (no relation), until 1957 when he also resigned.

Robert E. Foster was one of the kindest and finest men the writer has ever met, and a born leader as evidenced by his build-up of the inspection work in Florida as well as his activity in all National beekeeping activities; president of the Apiary Inspectors of America (2 years), president and director of the Southern States Beekeeping Conference which he helped form, and for more than ten years a director of the American Honey Institute.

On hearing of his death Mrs. Dadant and myself went back to the evening when he and his equally beloved wife told us of their move from Colorado, overland in a Model T Ford, over roads which had as yet not been recognized by state or county commissioners as needing reorganization to take auto travel. After due hard-



ships and little else left but tired bodies, a much used car and a need for credit, they finally reached their destination, undaunted.

Nor were we slow to recall a delightful trip in our car from the Southern Conference meeting in Nashville to Chattanooga with Foster and Leslie Lewis of Havana, Florida from whence they departed by train for home.

Mrs. Dadant often reminisces over the fact that Foster and Lewis by dint of genuine persuasiveness influenced her to accompany them on a trip to Ruby Falls in the cave under Lookout Mountain, though she didn't

MEETINGS



HERE and THERE

Pennsylvania Short Course Penn. State August 18-23

Details of this Short Course were given in "Meetings" last month. Since this is an outstanding event why not make your plans to attend and you will be amply rewarded. There is always additional knowledge for everyone in these well planned courses. Refer to July, page 284, for details or write Dr. D. R. McClay, 211 Armsby Hall, University Park, Pa.

Purdue University Annual Field Day, August 6th West Lafayette, Indiana

9:30 a.m. (C.D.T.)—
Purdue Agronomy Farm, 5 miles northwest of West Lafayette, Road 52.
Introduction of State Bee Inspection Staff—Gilbert Perigo, Chief Apiary Inspector, Indianapolis.
Factors of a Honey Crop—Dr. E. C. Martin, Michigan State University.
Tour of Pollination and other Experimental Plots—B. E. Montgomery and other staff, Purdue.
11:45 a.m. (C.D.T.)—
Basket Dinner—Columbian Park, Lafayette
1:15 p.m. (C.D.T.)—
Room 108, Smith Hall (Dairy Building)
Welcome to Purdue Again—Dr. John V. Osmun, Chief in Entomology, Purdue.
Our Principal Honey Plants—Dr. E. C. Martin, Michigan State University
Factors Influencing the Secretion of Nectar—(Speaker to be announced)
The 1958 Season—Gilbert Perigo
Introduction of Guests

PROGRAM FOR LADIES

10:00 a.m. (C.D.T.)—
Room 118, Smith Hall (Dairy Building) (To be announced)
11:45 a.m. (C.D.T.)—
Basket Dinner, Columbian Park
1:15 p.m. (C.D.T.)—

Room 118, Smith Hall
Demonstrations in the Purdue Experimental Kitchen-Home Economics Extension Staff.

Midwestern, Missouri, Kansas City, August 10th

The Midwestern Association will hold its meeting combined with a picnic at Shelter House No. 7, Swope Park, Kansas City, Missouri at 2:30 P.M., August 10, Sunday. A honey contest will be held. Everyone welcome.
Carroll L. Barrett
Secretary

Empire State Honey Producers Watertown, N.Y., August 16th

The summer meeting and picnic of the Empire State Honey Producers' Association will be held at the Township Fire Barn (Burrville) Watertown, New York, on Saturday, August 16th. All beekeepers, their families and friends are invited. A bus tour of the St. Lawrence Seaway is being planned for Sunday, reservations to be made through Howard Norton, Limerick, N.Y.
Mary Cary Trippe
Secretary

Cook DuPage (Ill.), Worth August 17th

A phone call from A. J. Smith announced the date for this meeting, August 17th, at A. J. Smith's home in Worth. Address 5835 West 127th St., Worth. No details.

Manitoba Honey Show Winnipeg, Aug. 20th - 21st

The Manitoba Association will hold its annual Honey Show at the Winnipeg Auditorium in conjunction with the Provincial Fruit Show and the International Flower Show. Prize lists for this event are now available.

This is the opportunity for every beekeeper to enter a competition and

help promote the sale of honey by advertising with entries in a competition. Keep this show in mind and select some of your top quality honey for competition purposes.

D. R. Robertson
Provincial Apiarist

Middlesex County (Mass.) Westford, Aug. 23rd

The August meeting of the Middlesex County Association (Mass.) will be held at the farm and apiaries of Charles L. Helmboldt, Lowell Road, Westford, Mass. Saturday afternoon, August 23 at 2 o'clock.

A large delegation headed by a former president of the association, Mr. A. J. Baptiste who is now president of the Eastern Apicultural Society attended the Fourth Annual Meeting of EAS at the University of Massachusetts, Amherst, August 7-8-9.

Lolita Pamplin
Corresponding Secretary

Vermont Summer Annual Randolph Center, Aug. 23rd

The Vermont Association will hold its annual summer meeting at Vermont Agricultural and Technical Institute at Randolph Center, on Saturday, August 23.

Business meeting starts at 10:00 A.M. Afternoon program starts at 1:00 P.M.

Bring samples of your honey for prizes. And be sure to bring your lunch for there are no restaurant facilities available near by. Everyone is welcome.

Clyde N. Wood
Secretary

Kane-De Kalb (Ill.), Summer Meeting Aug. 24th, Johnson Mound Preserve

The summer meeting of the Kane-DeKalb Association will be held Aug. 24, Sunday at the Johnson Mound Forest Preserve, between Geneva and Elburn, Ill.—rain or shine. Mrs.

Klebes (hostess) says potluck will be served at 1:00 p.m. daylight time. The Association will furnish ice cream and coffee. It is hoped that members from other associations will also attend. Bring along your questions.

Mrs. John Wetz
Secretary

Central New Jersey New Market, Sept. 13th

There will be a meeting of the Central Jersey Association at the home of Michael Valosin, Shelton Road, New Market, across the street from Hadley Airport, at 2 p.m., September 13th. Proper care of bees will be discussed and a question and answer period is planned. Visitors are welcome.

Forrest Campbell
Secretary

Beekeeping Exhibit at 1958 Pet Festival New York Coliseum, Nov. 26-30

A bee exhibit, one of the highlights last year, will again be featured at the Pet Festival at the New York Coliseum, Nov. 26-30. Last year's display was put on by Henry Neiden-gard, Clifton, N. J., and the huge audience (82,340 visitors) never seemed to tire watching the bees and asking many questions about the life and habits of bees. Complementing this display was the honey exhibit of William Ebert, Westfield, N.J. He did a brisk business selling his products.

Thanksgiving week-end, Nov. 26-30, was selected because this is the longest holiday week-end of the year, making a maximum audience available. Information on bee breeders' participation or equipment manufacturers' booths may be obtained from Animal Business Associates, Inc., 1370 E. 19th St., Brooklyn 30, N. Y.

Iowa State Fair, August 22-31

It is getting close to the time when we again have to be thinking about and planning for the State Fair. In the past, this exhibit has, by a great many people, been declared the most interesting at the State Fair. We now want to ask every beekeeper in the State of Iowa to contribute to any part of the exhibit. Let's all take part so this will continue to be a fine display.

We are declaring the first Sunday of the Fair, "Beekeepers' Day" and invite all beekeepers and their friends to gather just east of the

Agricultural Building for lunch. Bring your own basket lunch. Sorry we can't arrange for free passes at the gate but we feel it will give us a chance to meet old and make new acquaintances.

We are again wishing much success in the operation of the sales booth which has been a fine source of income to the Association. We have observed that several have signed up to help out. Your cooperation in this project is indeed appreciated.

Entries in the Apiary Department will close Tuesday, August 12th, so be sure to get in ahead of the dead line. Entry days are August 20th and 21st. The Fair starts on the 22nd and closes on Sunday, August 31st.

Please write to L. B. Cunningham
Iowa State Fair Board, State House,
Des Moines, Iowa, for your copy of
the Iowa State Fair "Premium List."
Carl Soder
Glen Stanley

Berks County (Pennsylvania) Leesport, Aug. 23rd

The Berks County Association will have a summer meeting, 2 p.m., Saturday, August 23rd, at the Onteleumee Orchard, Leesport. This is on Route 122, 9 miles north of Reading. An interesting program has been planned. Our famous Honey Ice Cream will be served. Bring your smoker for the smoking contest. All persons interested in beekeeping are invited.

Samuel B. Althouse
Secretary

Western New York Honey Producers Akron, Aug. 2nd

We will have our annual picnic and meeting August 2nd, at Akron Park, located on N.Y. Route 93 about a mile north of U.S. 5. Lunch will be served at about 12 noon.

Paul C. Lang
Secretary

National Honey Queen

In the "Pennsylvania Beekeeper" we learn that the Pennsylvania Honey Queen will be selected at Valley Forge the 16th of August to compete for national honors. By Federation requirements the one selected must be 17-23, have poise and personality and be able to represent our product in the best manner. She also must be able to attend the National Honey Show and the Convention in Tampa.

In Memoriam

Dr. Cecil A. Jamieson



Just as the August Journal is being set-up, G. H. Austin, of the Apicultural Division, Experimental Farms Service, Ottawa, Ontario, wires that Dr. Jamieson passed away, July 19th. He gave no details. Dr. Jamieson was comparatively young, only 54 years old, and his loss as Chief of the Division is a blow to both Canadian and United States beekeeping.

He was active in research and in publishing the results of his findings. He is well known everywhere in both countries. At one time we were associated with him in the study and treatment of Nosema. There has been a long period of correspondence between Dr. Jamieson and the Journal staff and he was one of our most valued consultants.

In the present Journal cover series he was the Mystery Guest on the February issue. He was born in 1904 on a farm at Edgar, near Barrie, Ontario. In the course of his higher education, he received a BSA degree at the University of Toronto in 1937. Attended McGill University in 1941 and 1942. Received his Ph.D. from Cornell University in 1951. He taught at the Ontario Agricultural College in 1937. C.E.F., Ottawa, research, 1938. Chief of Division since 1950. Special fields: Taxonomy of pollen grains; crystallization of honey; bee diseases and control, particularly Nosema.

He leaves a family of four, his wife, Ruth, and three daughters, Valerie, 14; Sandra, 12; Catherine, 7. Our respects, Mrs. Jamieson, and our best wishes for a satisfactory adjustment.

Lola Louise Lyle

Mrs. Newman I. Lyle, 58, of Sheldon, Iowa, passed away June 8th at Rochester following surgery. She had been ill only a short time. Ever since

their marriage over thirty years ago Newman and Lola have become well known together everywhere in this country. Together they looked after the family farm and took care of several hundred colonies of bees, operated mainly for chunk honey production. As members of Sioux Honey Association Newman and Lola were very active in the affairs of that group.

Newman writes he will continue with the farm and the bees and soil conservation work. The many contributions sent, following the loss of Mrs. Lyle, will be used to establish a memorial in her name for cancer research with the American Cancer Society.

Both Newman and Lola were graduates of Iowa State College and Lola taught home economics and served as principal in various schools for four years. She was a member and held various offices in the Iowa State Beekeepers' Association Auxiliary. She was also a member of the American Beekeeping Federation Auxiliary and held all offices in that organization.

At the convention in Columbus last February she was honored by receiving the first gold membership pin with the past president's gavel.

There are few in the beekeeping industry so devoted to each other and to the affairs of American beekeeping as Newman and Lola were. We will all miss her and extend to Newman the hope that he will find it worth while to carry on in her name.

Eastern Apicultural Society

Eleven beekeepers' associations comprise the society above which is to have its meeting Aug. 7-8-9 on the campus of the University of Mass. at Amherst. During the course of the meetings a trip will be taken to the old home of L. L. Langstroth at Greenfield where he wrote his book "The Hive and Honeybee." Cost of the three days is estimated at \$21.00 per person including room, board and registration. Inquiries should be directed to the secretary, Mrs. Maxine Manchester, Cornwall R.F.D. 2, Middlebury, Vt.

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Favorite Recipes



Broiled Cling Peach Halves with Creamed Honey

- 1 lb. link sausages 6 teaspoons creamed honey
6 canned cling peach halves ½ lb. bacon

Arrange sausages on broiler rack in unheated broiler, about 5 inches from heat. Broil 8 minutes turning frequently. Drain peaches thoroughly and arrange cut side up under broiler with a teaspoon of honey in each peach cup. Place bacon on rack. Broil 5 to 7 minutes longer until meats are cooked and peaches lightly browned. Serves 6.

From American Honey Institute

Madison, Wisconsin

Honey Dressing

Served on fruit salads is delicious—

Beat together ¼ cup honey, 3 tablespoons lemon juice, 1 teaspoon salt, and ¼ teaspoon paprika. Add ¼ cup salad oil gradually beating all the time.

This is good also on cabbage salad. Mrs. Chesley Harbo, Grove City, Minn.

Baked Apple Custard

6 medium-sized apples, 2½ cups water, ½ cup honey (or a little more, according to taste). Pare and core the apples. Boil honey and water for about 10 minutes. Simmer apples in this syrup until tender, and drain. Arrange in casserole and dribble over a little more honey.

Now prepare a custard by beating slightly 5 eggs, ½ cup honey, ¼ teaspoon salt, and 1 quart of scalded milk. Pour this over the apples in casserole, sprinkle with nutmeg.

Bake in slow oven (325° F) in a pan of hot water for 30 to 40 minutes, or until a metal knife inserted a little off the center comes out with only a fleck of custard clinging to it. Never test custard until it has baked at least 25 minutes, since disturbing it before may make it separate. Set casserole on rack to cool. It won't be quite done in the center, but will hold enough heat to finish cooking.

Edna Hartmann

Dade City, Florida

Deluxe Bread Pudding

Eight slices of day-old bread; 2 tablespoonfuls of butter; ¼ cup of sherry wine; two eggs slightly beaten; 1½ cups of liquefied non-fat dry milk; ½ cup honey.

Spread slices of bread evenly with butter. Place four of these slices in an 8x8x2 inch square baking dish. Sprinkle ½ tablespoonful of sherry over each slice. Top same way with

remaining slices of bread, sprinkling each with ½ tablespoonful of sherry.

Combine the eggs, dry milk and honey and mix well. Pour this mixture over the bread slices. Bake in a 350 degree oven about 30 minutes (or until done). Serve hot or cold.

Mrs. Martin Roth
Manor, Texas

Honey-Applesauce Cup Cakes

- ½ cup shortening
¾ cup honey
2 cups sifted flour
1 teaspoon cinnamon
½ teaspoon nutmeg
½ teaspoon salt
½ teaspoon soda
1 teaspoon baking powder
1 cup canned or fresh, cool applesauce
1 cup seedless raisins
2 stiffly-beaten egg whites.

Cream shortening and honey. Sift dry ingredients and add alternately with applesauce. Add raisins. Fold in stiffly-beaten egg whites last. Fill muffin tins ¾ full. Bake at 350° F. 25 minutes or until done. Store in container with tight lid. Will keep for weeks.

Mrs. Ward Kruse,
Sherwood, Ohio

Honeyed Chicken, Chinese Style

Ingredients—12 servings

Frying chickens, disjointed—2 (3 lb. size)

Egg yolks—2

Melted butter or margarine—¼ cup

Soy sauce—¼ cup

Lemon juice—¼ cup

Honey—½ cup

Seasonings—

1. Arrange chicken pieces in shallow baking pans.
2. Beat egg yolks, slightly.
3. Add melted butter, soy sauce, lemon juice, honey, and seasonings to egg yolks. Mix well.
4. Pour sauce over chicken, turning pieces to coat.
5. Bake uncovered in (300° F.) slow oven for one hour until done, turning and basting once.

Delicious served hot or cold. This sauce is good over turkey or ham sticks.

Mona Schafer

Calif. Honey Advisory Board
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WHEELING, WEST VIRGINIA



It's a feast or a famine. In the lead paragraph in the last or June "Undercurrent" the fact was being cried over that too few took an interest in the department. So it did not appear in July as there were too few answers. We yelled for more to be used this month—then the feast began. We have more answers than can be printed so those left over will have to be used to continue the discussion in September. Meanwhile readers can sink their teeth into the new subject given at the bottom of this page.

Subject for This Discussion

What Do You Consider the Most Important Advancement in Beekeeping in the Last Twenty Five Years?

ANSWERS

Selected by postal date

Roy H. Gibbons
Bentley, Ill.

I think the most important advancement in the last 25 years is the introduction of disease resistance. Twenty five years ago foulbrood was taking a terrific toll, whole yards being wiped out. Resistance resulted in practical eradication. This represents a large saving in bees and equipment and it has allowed the production of larger amounts of honey.

Julius Lysne
Stockholm, Wis.

In my mind there is no doubt that the development of hybrid queens is the answer to this question. It has given the same break to beekeepers that has been given to cattle breeders and sheep men. No one need longer put up with low honey production or mean bees. As every practical beekeeper knows swarming can be greatly reduced by requeening each year. A young queen likes to stay home and will tend to remain in the brood nest at the bottom so the honey is above. Hybrids have given the beekeeper little swarming and good wintering also, two age old problems.

S. S. Clausen
Byron, Ill.

I think, perhaps because I am an inspector, that most of the advancement comes from careful inspection which keeps disease down to a low point. Also because of a more modern way of taking care of the honey crop, and packing the honey, especially in cartons.

Roy Littlefield
Exira, Iowa

The most important advancement in beekeeping in the last twenty five years has been in labor saving methods and equipment in the production of honey. Some of these are:

1. Control of A.F.B. which requires only a few minutes work per colony per year.

2. Swarm prevention which requires little or no frame manipulation, no searching for queens or cutting out queen cells.

3. Large food chambers in which the queen will move down into the brood chamber after the nectar flow starts, making it unnecessary to adjust brood nest for wintering, or to do a lot of feeding.

4. Supers that are easy to rid of bees and into which queens seldom go up to lay, and which are light enough so trucks can be loaded high from the ground.

5. Uncapping machine which will uncap in less time than knives and one which will uncap combs in the super, thus saving the unnecessary work of handling frames.

6. Equipment which will clarify honey and melt cappings as honey is extracted. This equipment requires only a few minutes work at end of day, and when the crop is in cans there will be only three or four cans of dark honey to every 1000 cans of light honey.

7. Excellent wintering with little or no packing.

Roger H. Heywood
Council Bluffs, Iowa

One of the most important advancements is the hybrids that have been developed from controlled mating. Most beekeepers who have tried these hybrids use them altogether. This improvement has done for beekeepers

what hybridization has done for corn. The queens are true to pattern and are usually gentle. The workers they produce are above all other workers and they have good honey gathering instinct, coupled with a certain amount of disease resistance.

Mrs. Roger Heywood
Council Bluffs, Iowa

Another important advancement is the use of drugs, especially sulfa. This is a wonderful way to control and keep down American foulbrood. It is very important in maintaining a clean, disease free apiary. It also assures customers of the purest kind of honey.

H. Spann Leitner
Winsboro, S. C.

Probably the most valuable advancement, at least to the large operator, is the realization of the value of the honey bee in cross pollination as this makes it much easier to secure sites for our bees in more desirable places. However, many farmers still do not know the value of bees and locating where this is true is still a problem. In my own case I have had a number of farmers write to me, wanting me to put bees on their farms. Twenty five years ago that seldom happened.

Thomas Charnock
Cape Charles, Va.

I believe the most important advancement is the development of the radial honey extractor. It enables the large producer to extract his crop faster, cleaner, and with less broken combs. It is economical to operate when run by electricity. Honey pumps may be attached to the extractors to pump the honey into large tanks for storage.

Here is a subject for the next "Undercurrent," suggested by Mrs. Roger Heywood, Council Bluffs, Iowa:

"HOW CAN WOMEN BE MADE CONSCIOUS OF THE NEED TO USE MORE HONEY IN THE HOME?"

Make your answers as short as is consistent with a good discussion. Send them to "Undercurrent," American Bee Journal, Hamilton, Ill. For published answers, subscriptions will be extended one month per type inch. New subjects for "Undercurrent" are welcome. What do you suggest?

How To



Do It

Address "How To Do It," American Bee Journal, Hamilton, Illinois.

The number one choice will receive a three year subscription extension; numbers 2, 3, and 4 will receive a full year each; numbers 5, 6, and 7 a six month extension each. Balance two months each.

Sometimes there are more items than can be used in one issue (as for this month). Those left over will be considered the following month.

Number One

Foot Switch with Electric Uncapping Knife

If you use an electric uncapping knife in the conventional way, just as it came from the factory, you'll bless the day you read this suggestion. Run—don't walk—to your nearest photographic dealer and purchase an electric foot switch; one of the very best quality, with heavy duty electric contacts assuring you of years of trouble free operation, retails for about \$10. After procuring the switch, plug your electric knife into it, and you are all set to uncap honey with the greatest of ease. This leaves both your hands free at all times for manipulating the combs. Furthermore, your knife need never overheat, for the instant you life your foot a trifle, the electricity is off, as far as the knife is concerned. In other words, you don't need a control box, nor a thermostat for your knife anymore.

One of the nicest testimonials for my foot switch idea came from a protege of mine recently. He remarked after using this device for a few days, that he wouldn't take ten times its cost, if he couldn't buy another.

Doonan Honey Farms
Des Moines, Iowa

Number Two

Quick and Easy Feeding

Perforated 10 lb. pails are expensive, soon rust; if enclosed in empty super, this means hauling lots of equipment. Boardman feeders only hold a quart, and any colony that needs feeding needs a gallon.

Other feeders require opening hives, removing frames, etc. Solution: Pick up gallon coke and soda jugs from drug store, perforate caps; tack piece of masonite or plywood over Boardman feeder hole, and bore hole in this the size of jug cap. You may need to run a string around jug through staple on hive to keep jug from toppling. One quick operation with each colony, and feeding is done.

Richard Taylor
West Barrington
Rhode Island

Number Three

Easy Loading

To facilitate loading drums or barrels of honey on the truck, try this. Obtain the use of a chain hoist, such as the one your mechanic friend uses to remove car engines. For overhead support, put a 4x4 post across the ceiling joists in your honey house; or, outdoors, use a stout tree limb or what have you. Roll the barrel under the hoist and secure the chain around it. Then lift the barrel and back the truck under. This saves building a platform to fill the barrels on; or it may save building a pit to back the truck down into.

Number Four

Smoker Dust

Did you ever start to cut nice, white chunk honey for jars and find little specks scattered about in the honey, some of it capped over? Don't blame the bees for this nuisance. These specks are ashes from your smoker on an earlier inspection. To eliminate this trouble keep the funnel of the smoker stuffed lightly with green grass. This will filter the smoke and it may prevent spoiling a few nice sections.

Joseph W. Watkins
Columbus, Ohio

Number Five

Multiple Use for Alcohol Compound

It is useful to carry a bottle of isopropyl alcohol rubbing compound

when handling colonies, or clipping and marking queens. I find that a cloth or handkerchief wet with this compound will remove propolis from hands and from the hive tool to reduce the chance of disease spread. It will also remove the odor of sting poison from hands and wrists to lessen the danger of getting stung repeatedly because of sting odor. It is also soothing to sore, feverish hands and wrists that are tired and over stung.

Wiping the clipping knife and instruments for holding the queen for marking and wiping the fingers well with the compound after clipping and marking each queen lessens the danger of the queen being balled when she is returned to the colony. It lessens the odor (or queen substance) that would otherwise be transmitted from queen to queen to cause balling that might result in the death of the queen or injury to her.

This compound is also good to sterilize minor cuts and scratches often received from tacks, staples or otherwise.

Raymond Presnell
Banner Elk, North Carolina

Number Six

Inserting Foundation in Hot Weather

Wet a burlap bag thoroughly, then hold one end so that the two thicknesses are flat on a flat surface. Set a stack of not more than 20-40 sheets of foundation on this and fold the rest of the bag over the foundation. Remove the foundation a sheet at a time and place on a wet foundation board. Put your frame in position and dip the spur embedder in water (do not flip the water off) and embed the wires. Keep all wet articles wet. This will work with no sticking or trouble in most of the highest temperatures in this country. I have used it when the temperature was well over 100.

Henry Wood
Porterville, Cal.

Number Seven

Relayed Requeening

If you find it hard to install 20-25 queens at a time, just plan, if possible, to requeen about 5 colonies each week. Get the queens to come that way and they can be used in a short time. Remove two or three combs of brood from each colony and shake off the bees so you won't get the queen. Put these combs in a body filled out with empty combs and set them over an excluder on top of the colony. Put a queen in her cage between two of the brood combs and close the hive. Nurse bees from below will soon cover the combs above. Next day remove the excluder and replace it with an inner cover with a piece of queen excluding zinc over the escape hole. Take the paper cover off the candy compartment of the queen cage and push a match stick through the candy to hasten release. Let the new queen fill the upper part with brood and then remove the inner cover so the two lots of bees will unite. Meantime provide a small entrance for the upper unit.

Julius Lysne
Stockholm, Wis.

Cardboard for Escapes

If you still use bee escapes in taking off honey and need extra boards, flat pieces of corrugated cardboard from shipping boxes can be cut to the size of the hive body with an opening in the center for the escape. They work all right. They are not as good as the usual board inner covers but they are useful in a pinch and the cost is only the time used in cutting.

E. V. Goff
Blissfield, Mich.

Wax Off Excluders

This is so simple as to be ridiculous yet I haven't seen it advocated. Melt the wax off your excluders in a solar wax melter made the right size.

A. J. Jones
Malden, Mass.

Transferring and Boosting Too

Sometimes old box or log gums are available to the modern beekeeper who needs booster bees. Place one of these near the front of a weak colony, set up just as it was normally. Fill dirt around the base as high as needed to keep the bees from getting out. Be sure the gum is bee tight.

Then bore a $\frac{3}{4}$ inch hole on the side nearest the modern hive and tack a screen wire cone over this hole. If you want a lot of bees, feed both colonies. Otherwise leave this set-up for about 35 days; or until you want to remove and dispose of the old gum.

Herbert E. Lawler
Lexington, Tenn.

TRENDS—

(From Page 311)

than $5\frac{1}{2}$ million pounds and 1956 figures may indicate over 7 million pounds. Importations since 1954 have been largely done by commercial packers in British Columbia and particularly eastern Canada for blending and packing in consumer containers.

The price of honey in bulk from 1926 to 1951 has varied from 8 cents to over 18 cents yet the end of sugar rationing in 1947, lack of an export market, high production and competition with other sweets brought about a marketing problem. For the first time Canada had to sell its production within its own boundaries. Honey prices dropped and a record production of over 48 millions pounds in 1948 resulted in a surplus. The Federal Government bought $3\frac{1}{2}$ million pounds in 1949 to relieve the situation. By 1951 this honey was sold through normal channels. Since 1952 prices advanced to their present level. Then in 1954 a poor crop and a relatively high price enabled packers to import to maintain their markets. Importation has increased since and is likely to continue as long as the price relationship remains the same.

The bulk of Canadian honey is now handled by packing organizations and producers concern themselves largely with production. Specialized production with higher grade requirements also contributed to the change in marketing. Honey is no longer being sold in large containers. Packs of two pounds or less are becoming increasingly popular. Food marketing is being done extensively through large chain stores that want a steady supply of a standard product that most beekeepers are not able to provide. Most honey in Canada now is sold in tin or in paper containers as granulated honey although in recent years sales of liquid honey in glass have increased.

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Weslaco, Texas

The Scramble — — A Contest

Editor - Pat Diehnelt



JULY SCRAMBLE

Henry A. Schaefer

Is Henry well known? We have a flood of answers and still coming in. Likely too his being well known is in part due to his all around popularity; and in part to his being so active in Federation affairs. He is a past president of the Federation and Mrs. Schaefer is a past president of the Auxiliary.

Henry is a commercial beekeeper with about 1200 colonies. He is a frequent contributor to the Journal and his methods of beekeeping are unusual and have been published a number of times. He served in the first World War in the air service with the 12th Aero Squadron. He was discharged in 1919 with nephritis. The doctor said: "One month." A strict diet including dairy products and honey, and the grace of God and the help of a good wife his trouble disappeared in three years and he is still with us.

JUNE WINNERS

Subject: F. B. Paddock
Ames, Iowa

Number One

Francis Wickham, Warren, Pennsylvania

Floyd B. Paddock is Extension Apiarist for the Extension Service, Iowa State College at Ames. He is also in charge of bee disease control for the state where for a long time disease control has been based on education rather than regulation. It is likely that the results in Iowa, with this approach, have been equal to the results in any other state.

Paddock's forward thinking has been prominent in many ways. Perhaps his greatest program of education was supported by demonstration apiaries in different parts of the state and by his radio educational programs; plus his quarterly publication for beekeepers and his annual report.

He received his education from Colorado A & M College, Ohio State University, and the University of Wisconsin. He was an instructor in entomology at Texas A



The Scramble for This Month

We might call the subject of this month's Scramble an iconoclast (an image breaker). He is not at all satisfied with things as they are. He does not hold with father, or grandfather, or grandfather's father. There must be some better way to do what we have to do in beekeeping. Some do not agree with him but he says, "If you want things to be better you must give up your pet ways and accept those that mean more to you." So, that makes him a researcher, a beekeeper and a writer. That's enough. See what you can do with that. Who is it? Send your answers to "Scramble—American Bee Journal, Hamilton, Illinois." For the best answer, three more years of ABJ; second, two years; third, one year; the rest four months each. Answers will be published as far as space allows.

& M College; then associate professor; then Entomologist for the Texas Experiment Station; finally associate in entomology at Iowa State College; then professor of apiculture.

He is also a commercial beekeeper and knows our problems. His interest in the humanities led to a study of bees and human relations, the fruit of his studies given to us for the first time. Fun title: King of all beekeepers.

Number Two

Aylmer Jones, Malden, Mass.

Floyd B. Paddock of Ames, Iowa, Extension Apiarist of Iowa State College of Agriculture, also in charge of bee disease control in Iowa. He is best known for efforts to educate beekeepers, for articles, and publications, including the discontinued but fondly remembered Iowa State

Apiarist Reports. It is hard to give a joke title to one so sincere, but suggest "The Beekeepers' Beekeeper."

Number Three

James L. Pecinovsky, Tampa, Kansas

This is F. B. Paddock of Ames, Iowa. He is Extension Apiarist for Iowa State College and State Inspector and Secretary of the Iowa State Beekeepers' Association. He has written many articles and publications. My fun title for him is: "The Midwest's Most Colorful Bee Man."

Number Four

Ernest Haht, Primghar, Iowa

This man must be from Iowa as near as I know from reading about him. He works for Iowa State College where work in breeding disease resistant bees started in 1935 under O. W. Park, Floyd Paddock and Frank C. Pellett.

—The Market Place—

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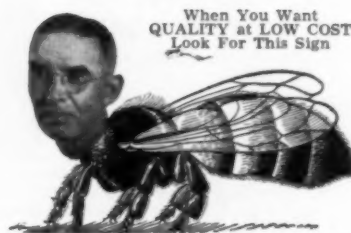
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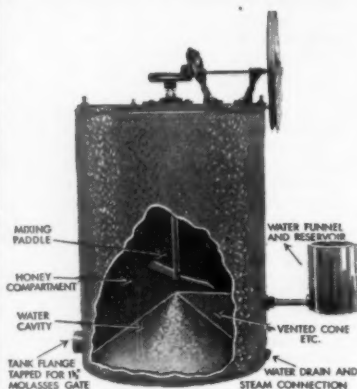
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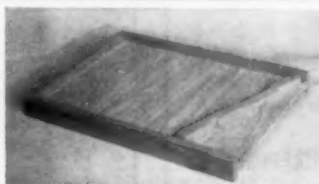
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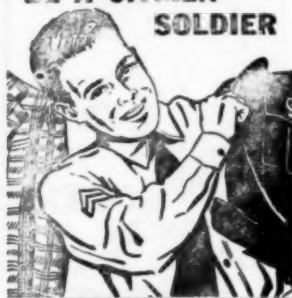
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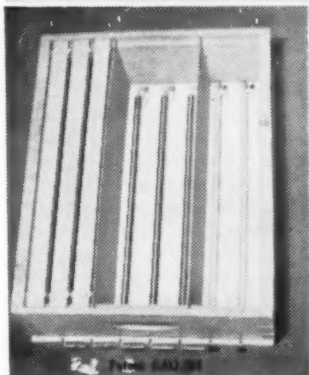
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—Crop and Market—

by M. G. Dadant

THE CROP SO FAR

Generally in the Southeast the crops so far have been disappointing. Georgia and Florida report not much more than half of 1957, with the orange crop caught by the cold weather and the gallberry a disappointment also. Tupelo seems good, and rains make for fair prospects for the balance of the season.

The Carolinas and Virginia had winter losses and weak colonies which prevented taking advantage of the earlier flows. Farther north in Virginia and the West Virginia territory, crop so far has been good. New Jersey also. The New England States were handicapped by early dry weather which has been followed by abundance of rain so that the crop so far has been slack.

Copious rains in Pennsylvania have put the clovers in the best possible condition but only at an expense of the crop size since much clover matured without the bees being able to take full advantage of it.

At the same time, similar rains did interfere with the fulfillment of decidedly favorable conditions early in Arkansas and Louisiana and Texas, though Oklahoma and Tennessee report decidedly better crop than a year ago, the first from vetch and crimson clover and the latter from the clovers. Texas may have no more than a year ago unless annual sweet clover and cotton make up for earlier disappointments.

While Nebraska reports a good crop, Kansas seems disappointed. Missouri is enthusiastic over clover yields which are much better than a year ago. New Mexico, while good, is short of a year ago. Arizona seems equal. While the early California crop was short from orange, this is being made up owing to the fine yields from the well-moistened desert lands. Some yields from white sage have run as high as 150 pounds, where of late years the yields from this plant have been negligible. Other desert plants have yielded similarly, so the total California crop already harvested is past that of a year ago.

PROSPECTS

Given favorable weather, prospects

maturing, the balance of the season seems very good. Most sections have ample rains, in fact too much rain from now on may be the limiting factor. Yet cold and dry in the entire Canadian Provinces have been and will be a handicap for a good crop, even if rains fall now.

It looks like clovers everywhere are more abundant and blooming; and yielding and blooming again later than usual. Soy beans in the Mississippi Valley never looked better in the lowlands. The Intermountain territory has ample irrigation water and the desert areas and irrigated area of the West generally have more moisture than usual, even though cool and inclement weather in some parts of the Intermountain Section are foreboding.

All in all, however, wet is better than the dry of 1957 and it looks like we would end up with a crop in excess of 1957 even with the Southeast slump in production and the influence of drought in the North, as well as the early short build-up in bees all along the Atlantic Coast.

HONEY SOLD

Very little of the new crop has been sold except in the early crop areas. The Southeast with a short crop has not had much worry about the crop moving although there has been a tendency toward a slightly lower price on the amber grades. In these areas as well as in the entire South there should be little difficulty with sale of the bulk comb crop, especially as those producers in the Central states are worrying right now with bulk or comb honey supers quite well filled on the hives and a doubt whether the crop will continue sufficiently after late rains, so all of this uncapped honey may be sealed.

Most of old crop honey has now moved out of producers' hands although in some instances at the sacrifice of from 1c to 1½c below what might have been obtained in early winter.

In California the orange crop is pretty well cleaned up and at figures

Honey Wanted—Cars and less than car. Top Prices.
C. W. Aeppeler Co., Oconomowoc, Wis.

that do not compare too badly with 1957, but the flood of sage and other so called "wild honeys" have made the buyers unenthusiastic on buying at 1957 figures. In fact we have heard of a drop in some cases of to 1½ cents below previous quotations.

On the other hand, in states where commercial honey production is limited and may sell their own honey through the usual packer and grocery channels there seems to be tendency to plan to hold at 1957 figures.

This seems a year for waiting till the market establishes itself. In other words, the buyers buy or sell, if they are satisfied with prices given or offered.

Cover Contest

(From Page 305)

Medal. He finished his B. S. Degree in 1921 under the G. I. Bill of World War I. It was in his junior year of college that he became interested in bees and since then his interest has never stopped.

After four years on the staff at the University of Wisconsin he came to the University of Illinois in 1925. He came to further his apicultural training and since arriving he has risen from an Assistant to full Professor in apiculture and entomology at the University. He became full Professor in 1952, and in 1955-56 he became acting head of the entomology department. He is presently in the horticulture department of the College of Agriculture at the University. His writings about bees are the result of his fine research and total over fifty major reports and articles.

His positions with the bee industry have been as follows: Secretary of Illinois Association; Honey Producers' League; National Federation; Honey Standards; Finance; and Honey Plant Committees. The communication of the bee has been a long study with him. At the present time his apary is in Dr. Henry's back yard—President of the University of Illinois.

France Imports Honey In 1957

For 1957 France reports (Abeilles et Fleurs) the importation of 6 million pounds of honey. Mexican honey leads the imports, followed, surprisingly by China, then Hungary, Spain, and the United States a poor fifth.

In most European countries honey sales may be made only by declaring on retail packages whether honey is native or imported. In Belgium recently several penalties have been inflicted for misbranding, or failure to declare country of origin.

The Selling Combination



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Shipping Case

To ship and display your comb honey sections in the most attractive way, use this corrugated display case. It can first be used to ship the comb honey and then quickly converted into a beautiful display case.

Coated in dark green and printed in yellow and light green it will make your comb honey stand out among other food products.

S50—10 cases \$2.60

Prices plus postage. For prices on larger quantities check catalog.

For further information about window cartons and shipping cases see your nearby Root dealer or write one of the outlets listed below.

THE A. I. ROOT CO.

Factories at Medina, Ohio — Council Bluffs, Iowa — San Antonio, Texas

Distributors in Principal Cities

DEALERS EVERYWHERE

UNIVERSITY MICROFILMS
313 NORTH FIRST STREET
ANN ARBOR MICHIGAN
DEC 57-58

It's Time For Extracting and Packaging Your Honey

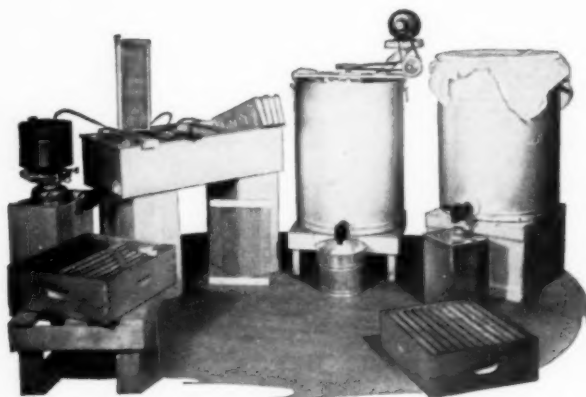
Dadant & Sons, Have All Necessary Equipment Available.

EXTRACTORS
(All sizes)

HONEY TANKS
(All sizes)

TANK GATES
(All sizes)

PUMPS
(All sizes)



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COLOR
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How About Uncapping Knives?

Dadant's have all styles available, Plain, Steam or Electric.



Attractive packages help sell your crop so we suggest that you check your supply of **LABELS, PASTE, GLASS JARS, TIN CONTAINERS, and PLASTIC DISPENSERS.**

Get in touch with your nearest Dadant Dealer, or write to any of our 6 distribution points.

Dadant & Sons, Inc.

HAMILTON, ILLINOIS
BRANCHES

1010 W. Austin Street
Paris, Texas

180-200 Canisteo
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Stephenson Ave. at 14th St.
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Route 41, South
Macon, Georgia

722 West O'Connell St.
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